



AUDIO CONTRACTOR



general catalogue 2013•2014



Audio Contractor

SOUND
DESIGN

2013-2014

**Sound Design Project
for the Municipal Casino in Venice**

- **Settings:**
12 rooms (max size 400 m²)
- **Requirements:**
Amplification system designed to select
4 music sources for 4 independent zones.
Minimal visual impact of loudspeakers
- **Operating system:**
1 MMS4004 4x4 matrix
1 MMZ8004 mixer featuring 4 output buses
- **Power amplifiers:**
3 MCA2240A multi-channel power amp.
- **Loudspeakers:**
30 STUDIO4/BT loudspeakers, 2-way, 60W RMS
applied to the ceiling
- **Microphone bases:**
1 MBT8004 unit for selected announcements in individual
zones and generating automatic alarm messages

Security and Emergency Systems



Controller	9
Router	10
Class D Modular Amplifiers / Main frame	11
Voice Alarm Integrated Equipment	12
Emergency Paging Units	14

High Quality Audio



MAD 4IP	16
---------	----

Conference Systems



Conference System CS series	22
Expansion Kit	23

Intercom Systems



Intercom 1300	24
---------------	----

Microphones - Microphone bases



Hand-held microphones	26
Gooseneck microphones	26
Condenser microphones	28
Microphone bases	29
Desktop bases	30

Wireless microphones

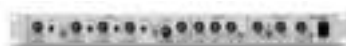


Wireless microphones and accessories	33
UHF microphones and receivers	34

Preamplifier equipment



Preamplifier/mixer	36
4 zone preamplifier	38



Control units and mixers



Zone paging unit	39
------------------	----

Power amplifiers



Multi-channel power amplifiers	40
Multi-channel amplifiers constant voltage	42

Racks and cabinets



Racks and cabinets, accessories	43
---------------------------------	----

Music sources



Music sources	45
---------------	----

Amplification equipment



Integrated amplifiers	46
Music distribution system	50

Ceiling loudspeakers and sound projectors



ABS surface mounting wall loudspeakers	54
Wall or ceiling speakers	54
Loudspeaker cabinets	55
Loudspeakers for underwater and clean room applications	56
ABS surface mounting wall loudspeakers and accessories	57
Mini surface mounting loudspeakers	58
DNH metal sound projectors	68
DNH ABS sound projectors	69
Sound projectors	61
Spherical speaker	62
Musical horn loudspeakers	63
ABS horn loudspeakers	64

Speaker systems



Column speakers	66
Sound projectors	67
Wall mounting speakers	68
Ceiling speakers	69
Horn speakers	70
Loudspeaker cabinets	71
Permanent installation loudspeakers	78

Weatherproof loudspeakers



Column speakers	81
All weather loudspeakers	82
External sound speakers	83



Wherever we go, we like to be heard.
We aim for total customer satisfaction.
We believe in fully customised sound-designs.
To provide high quality sound for every setting.
We achieve this thanks to our highly flexible
range, customised designs and constant re-
search into innovation.

Highly specialised in ambient amplification systems

Audio Contractor: a young and wise leader

This Brand, with a strategic and productive lay-out of the latest generation, was officially set up in 1998 as a Division of the FBT Group. Highly specialised in ambient amplification systems, Audio Contractor benefits from all the know-how and extensive expertise acquired by the parent company in over 40 years of business. In a short space of time, Audio Contractor has made its mark on the market, integrating and implementing a winning combination of strengths: attaining total customer satisfaction, constant innovation, offering an extensive range of products, top quality sound performance, and non-stop after-sales service 365 days a year.

Sound design: stylish designs

At the very heart of the corporate philosophy, the concept of "Sound Design", an original outlook on production and service aiming for standards of excellence in terms of technology and acoustics along with the "custom-made" design of the application venue - including theatres, conference halls, shopping centres, factories and hospitals. The major strengths of the brand, i.e. top quality, new developments and maximum reliability all contribute to offer an extensive and constantly updated range of products, distinguished by a stylish aesthetic look that epitomises the "made in Italy".

Music in the genes

The love of music and the application of this love, in an industrial context, to sound reinforcement are part of FBT's genetic make-up. A Group destined for success, because it traces its origins back to a special, unique part of the world in the Marche region called Recanatoli, where music has always been an essential part of the very fabric of society. Originally a small workshop established in the Nineteen Sixties, the Group is today recognised on a national and international scale as a leader in the manufacture of a variety of equipment, ranging from the Professional Audio Equipment amplification systems to the Audio Contractor ambient amplification, and also the Musical Instrument Distribution division, with a continuous growth trend.



... extensive range of products,
top quality sound performance,
and non-stop after-sales service...

Sound systems for large venues...

Solutions for professionals...



Clear announcements.

Hi-Fi music programming. Integrated control consoles, designed to create certain "frequencies" in every setting. Customised equipment. To make our customers feel even more at home, both in Italy and abroad, we design integrated sound systems. To reflect and interpret the sound "image" of every venue.

The Eighteenth-Century Villa Foscari - Cornaro in Gorgo al Monticano - Treviso, the "Le Brentelle" Shopping Centre in Rubano - Padua and the Municipal Casino in Venice, overlooking the Grand Canal, are but a few of the most prestigious projects completed.

Solutions for professionals

All of which are stubbornly devised to integrate the use of the most advanced technologies, with the smoothest aesthetic and architectural blend.



Thanks to a sturdy know-how geared towards attaining the utmost standards of excellence, Audio Contractor provides sound designs to meet the requirements of every "leading" venue.

SECURITY AND EMERGENCY SYSTEMS

EN 54 - 16

This series of products has been designed and engineered to offer the most innovating solutions in the realization of alarms systems, in order to manage emergency situations and to permit the guided evacuation, according to actual regulations (EN 54-16, ISO 7240-19 e EN 60849).

The VAIE 2250 offers the right answer for any system requirement; the combined action of the new control units and the new digital amplifiers permits flexible and easily expandable installations both for numbers of

VAC 2006 CONTROLLER AND DIGITAL AMPLIFIER DPU SERIES

It is possible to connect 6 controllers VAC 2006 to each other and to manage up to a maximum of 36 groups of DPU digital amplifiers, obtaining a 2 channel system with 36 output zones with double line.

zones and for sound power, in compliance with safety standards. The complete architecture of VAIE 2250 system is based on the controller VAC 2006, the management and diagnostics unit. It is highly recommended for big as well as small installations, where high performance of security, flexibility and easiness are required. Each VAC 2006 can manage 6 lines to which the following units can be directly connected:

- DPU range of digital amplifiers.

equipped with a diagnostics
card (up to 16 per line)

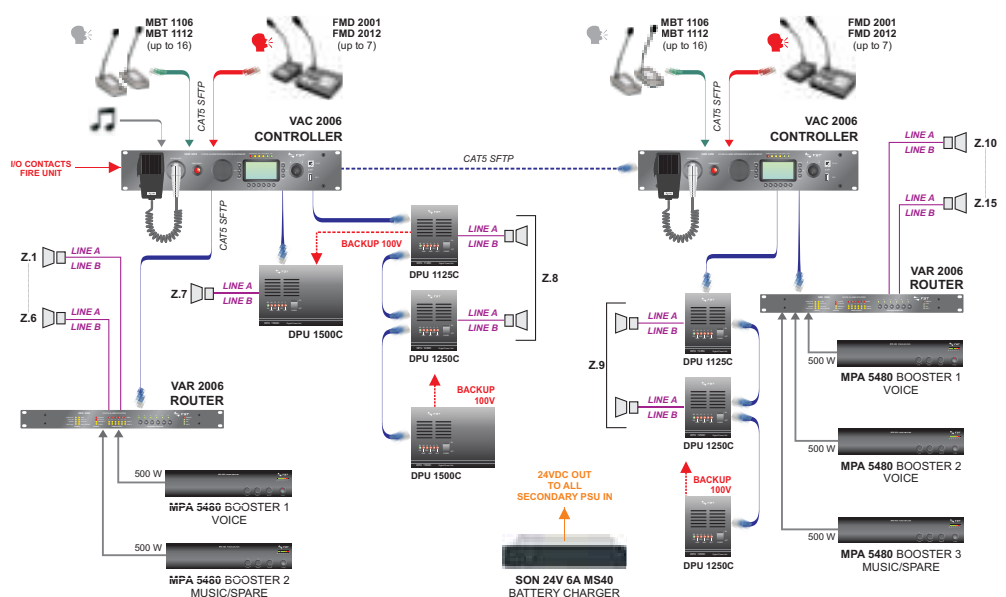
- Router VAR 2006 for up to 6 outputs zones with A & B speaker lines
- VAC 2006 Integrated Voice Evacuation Systems with 6 zones

The remote consoles FMD 2001 and FMD 1012 are fully diagnosed, and allow greater operational and management flexibility for any service and/or emergency calls and/or prerecorded messages on the zones of the system.

The possibility to connect in daisy

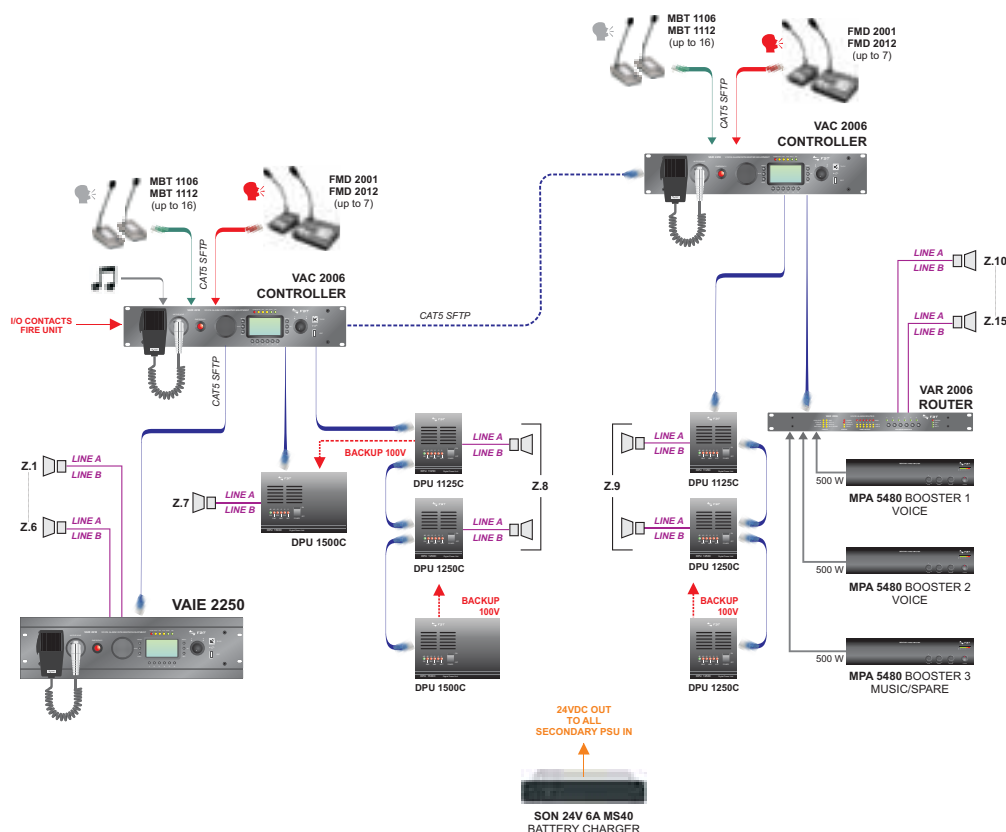
chain up to 6 controller VAC 2006
and to manage up to 36 lines
allows to realize up to 216 zones
for voice evacuation/music.

CAT5 network assures an easy connection of the several units, controllers, routers, digital amplifiers and emergency and/or paging call stations. This solution performs in efficient and economic installation also in big buildings, allowing the usage of both local and centralized equipment.



VAC 2006 CONTROLLER AND VAR 2006 ROUTER

In a system which includes 6 controller VAC 2006, each one connected to a maximum of 6 routers VAR 2006, it is possible to obtain up to 216 double line output zones.



Code 37713

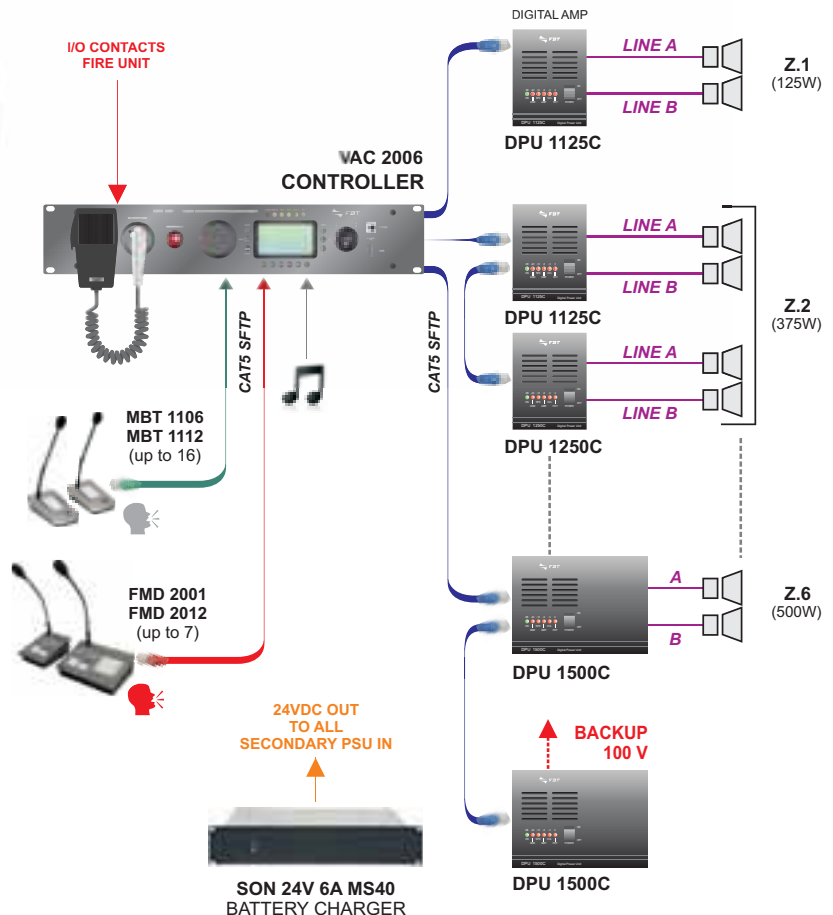
The controller VAC 2006 is the heart of VAIE 2250 evacuation system; it has been designed to drive all the supervising functions of the entire system, in compliance with the current safety standard for voice evacuation systems. It also manage and controls all the audio signals (evacuation, alert and standard messages and background music).

Feature:

- Controlled emergency microphone on the front panel
- 2-channel broadcast system
- Built-in message generator to broadcast prerecorded messages (EVAC and ALERT)
- USB input for background music source
- RJ45 CAT5 connections for:
 - 6 control lines for PMD digital amplifiers and/or router VAR 2006 and/or integrated
- voice evacuation system VAIE 2250
 - 4 redundant lines to connect other VAC 2006 in daisy chain (max 6)
 - 2 redundant lines for emergency microphone consoles, FMD 2001 range (max 7)
 - 2 lines for call stations FMD range (max 16 with 7 priority levels)
 - Back-up power amplifier

management

- Secondary emergency power supply input (24 VDC)
- 7 controlled input contacts
- 3 relay outputs
- Graphic display 128x64 pixel monochrome, for displaying multiple windows management
- Complete diagnostic of system fault events
- Standard rack mounting 19" (2 units)



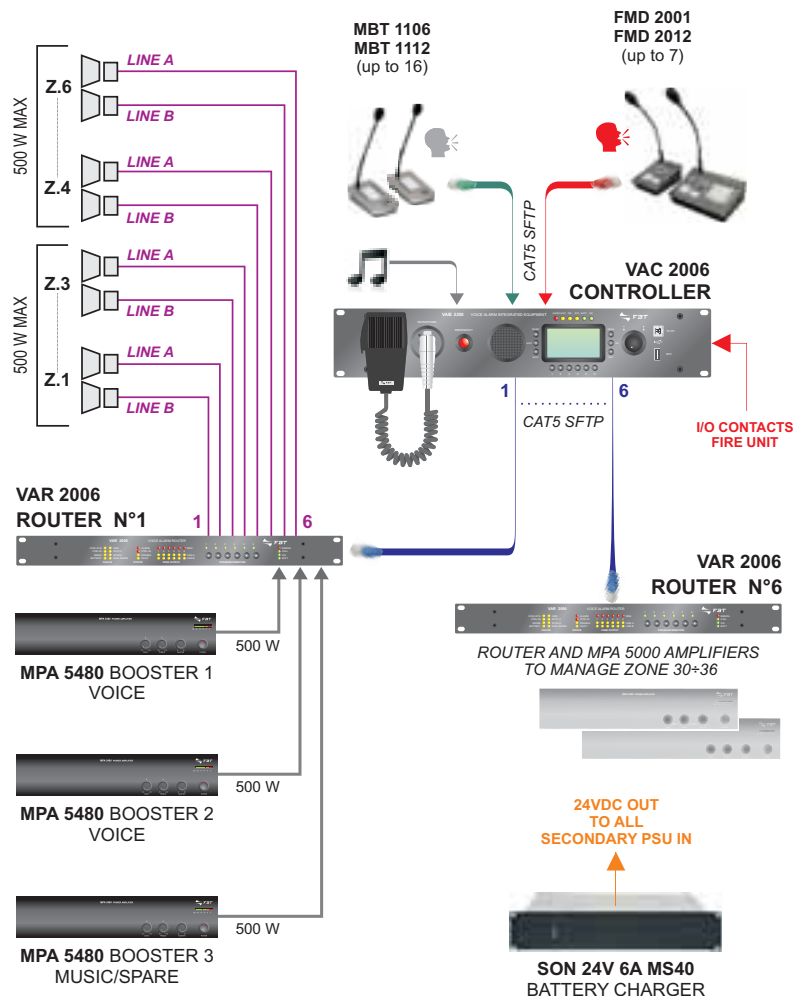
Code 37712

The router VAR 2006 is the best solution for the sound systems with a very interesting compromise between price and performance; connected to a VAIE 2250 control line, it can drive up to 6 zones with external power amplifiers (MPA5000 range) to a maximum of 1000 W. Each output line consists of 2 speaker circuits (A & B) in order

to guarantee the complete area coverage also in case of one loudspeaker circuit failure. The maximum system configuration includes 6 controllers connected to 36 routers (6 for each VAIE 2250) for a total of 216 zones. The router can be used with power signals (amplifier 100 V output). Two different configurations are possible: in the first one you

can connect 2 amplifiers (one for music and one for speech); in the second configuration it is possible to manage 2 voice amplifiers (3 zones each) and one music amplifier. In any case all connected amplifiers are constantly monitored and the music one can be also used as backup: in case of a failure it automatically replaces the voice amplifier.

- 6 loudspeakers zones with double output lines A+B
- Double input 100 V for 1 or 2 voice amplifiers (IN 1 zone 1÷3, IN 2 zone 4÷6)
- Front panel push button to switch on/off the music on each single zone
- RJ45 socket for VAIE 2250 connection
- 7 controlled input contacts
- 6 open collector outputs
- 2 relay outputs



Careful design and a choice of reliable high-tech components led to the creation of this range of extremely compact Class D amplifiers, capable of functioning even in the toughest conditions and with a minimum energy consumption.

They include a diagnostics board which permits easy and rapid test of the correct unit

operation and the check of the loudspeaker's line integrity. The double output circuit with a separate control (A and B) allows realizations of redundant line plants. In case of short circuit on one of the two output lines, the damaged line will automatically be disconnected to allow the regular working of the other one. The **CHA 1004 (Code 37711)** power card-cage enables amplifier

units to be installed in a standard 19" rack. On each cage can be installed up to 4 amplifiers DPU 1125 C and/or DPU 1250 C or up to 2 amplifiers DPU 1500 C.

The DPU amplifiers have been designed to be used with the VAIE 2250 system; they can allow to develop high power zones when they are connected to the controller VAC 2006 through a

shielded cable CAT5 SFTP.

A maximum of 16 DPU units can be connected to each of the six VAC 2006 output lines (zones); a backup amplifier for each group can be set.

The independent power supply of each amplifier makes this system really reliable and fully in compliance with safety standards.



	DPU 1125 C	DPU 1250 C	DPU 1500 C
Code	37724	37725	37726
Rated output power @230 VAC	125 W RMS	250 W RMS	500 W RMS
Power outputs	100 V	100 V	100 V
Distorsion at rated power	< 1%	< 1%	< 1%
Input	Double RJ45, In/Out audio/RS485 from VAC 2006	Double RJ45, In/Out audio/RS485 from VAC 2006	Double RJ45, In/Out audio/RS485 from VAC 2006
Frequency response	80-20.000 Hz	80-20.000 Hz	80-20.000 Hz
Low Cut filter (-3 dB)	330 Hz	330 Hz	330 Hz
Mains power supply	230 Vac $\pm$ 10% - 50/60 Hz / 24 Vdc	230 Vac $\pm$ 10% - 50/60 Hz / 24 Vdc	230 Vac $\pm$ 10% - 50/60 Hz / 24 Vdc
Power consumption 230 Vac	200 W (240 VA)	400 W (480 VA)	800 W (960 VA)
Power consumption 24 Vdc	4.6 A	9 A	17 A
19" rack mounting	PMS2001 optional basket unit (H: 3U + 1U for support brackets)	PMS2001 optional basket unit (H: 3U + 1U for support brackets)	PMS2001 optional basket unit (H: 3U + 1U for support brackets)
Installable quantity for each CHA 1004	4	4	2
Dimensions (W x H x D)	100x130x395 mm	100x130x395 mm	200x130x395 mm
Weight	6 kg	9 kg	18 kg

	MPA 5240	MPA 5480
Code	37489	37491
Rated output power @230 VAC	240 W RMS	480 W RMS
Power outputs	100-70-50 V, 8 Ω	100-70-50 V, 8 Ω
Distorsion at rated power	< 1%	< 1%
Input	Balanced line input, XLR	Balanced line input, XLR
Frequency response	30-20.000 Hz	30-20.000 Hz
Mains power supply	230/115 Vac $\pm$ 10% - 50/60 Hz / 24 Vdc	230/115 Vac $\pm$ 10% - 50/60 Hz / 24 Vdc
Power consumption 230 Vac	535 W (610 VA)	1160 W (1330 VA)
Power consumption 24 Vdc	13.2 A	33 A
19" rack mounting	RMK 5000 optional brackets (H: 2U) with AC50 lateral support	RMK 5000 optional brackets (H: 2U) with AC50 lateral support
Dimensions (W x H x D)	432x88x272 mm	432x88x360 mm
Weight	10.5 kg	16 kg

Thanks to the great reliability of the protection circuits used, combined with an attractive appearance and the very tough structures, the **MPA range** constitutes the ideal product for quality amplification, with a particularly interesting price/performance ratio.

If this amplifier is used in emergency systems, it is possible to disable all the front-panel controls (tone and volume controls). In this way it is possible to avoid any accidental modification of the preset levels (NORM/DIRECT switch).

On premises where large numbers of people are present it is essential to provide a suitable sound-broadcasting system that, following activation by the fire fighting control unit, will handle the emergency situation and enable guided and controlled evacuation of the building.

Current standards define in detail the features of an electro-acoustic system for evacuation and emergency purposes in terms of design and installation so that it will meet the applicable safety

and reliability requisites. The VAIE 2250 sound-broadcasting system is FBT's current answer to the needs specified in standards.

- Complete diagnostic of system fault events
- Control and monitoring of the integrity of the 'critical path' (audio signal starting from the capsule of the emergency microphone and/or from the message generator to the loudspeaker line, through the amplification chain)
- Continuous loudspeaker line monitoring (integrity and dispersion to earth) without interruption of BGM or paging calls
- Simultaneous broadcasting of the EVACUATION and ALERT message to different areas
- Supervision of the link with the fire fighting system
- Back-up power amplifier management (built-in)
- Management of a secondary source of 24 VDC power with a battery-charging unit

It can be possible to connect easily (by simple CAT 5 cable) two main VAIE 2250 to create systems of up to 12 zones, for a maximum of 1000 W and connect up to 14 emergency microphone units (thanks to the FMD 2011 and FMD 2012 console units). Another important aspect is the possibility to manage different input audio sources like microphones, paging units and music source devices.



	VAIE 2250
Code	37484
Power supply	230 Vca 50/60 Hz
Max consumption @ rated output power RMS	(500 W System) P = 650 W/800 VA (250 W System) P = 370 W/480 VA
Typical consumption with voice signal	(500 W System) P = 160 W/200 VA (250 W System) P = 90 W/120 VA
Consumption with no signal (test tone only)	P = 30 W/45 VA
Secondary power supply	24 VCC (min 22 Vdc ÷ max 28 Vdc)
Max consumption @24 Vdc (@28 Vdc)	500 W System = 17 A (21 A) 250 W System = 9 A (11 A)
Typical consumption with voice signal @24 Vdc (@28 Vdc)	500 W System = 4,3 A (5 A) 250 W System = 2,2 A (2,5 A)
Consumption with no signal (test tone only)	0,8 A
Operating environmental conditions	Temperature: +5° C to +40° C Relative humidity: 25%-75% non-condensing
Mounting	Optional AC8506 brackets for mounting in 19" rack (height: 3 U + 1 U support brackets)
Dimensions (W x H x D)	439x387x132 mm
Weight	20,5 Kg

MAIN SYSTEM FEATURES

- 2-channel broadcast system
- Up to 12 broadcasting zones
- Music volume control for each zone
- 1000 W maximum total power

VAIE 2250 technical features

- Two built-in 250 W RMS class D power amplifiers
- External 250 W amplifier to increase power (MPA 5240)
- Up to 7 remote emergency microphone units (SFTP CAT5 cable)
- Up to 16 paging units, 7 priority levels (SFTP CAT5 cable)
- Balanced microphone input (IN 1) with Phantom power supply and priority contact
- Balanced microphone or line input (IN 2) with Phantom power supply (MIC), priority contact or automatic precedence (VOX)

- Balanced line input (IN 3) with automatic precedence (VOX)
- Auxiliary line input for an external music source
- USB input for background music source
- 6 open collector outputs (system status or override to by-pass attenuators)
- 8 programmable and controlled input contacts
- 2 relay outputs for 'emergency' and 'failure' conditions
- Built-in loudspeaker for channel monitoring and acoustic failure signalling (beep)
- Easy and simple configuration (large LCD display)
- Emergency zone disabling and Do Not Disturb functions (DND)

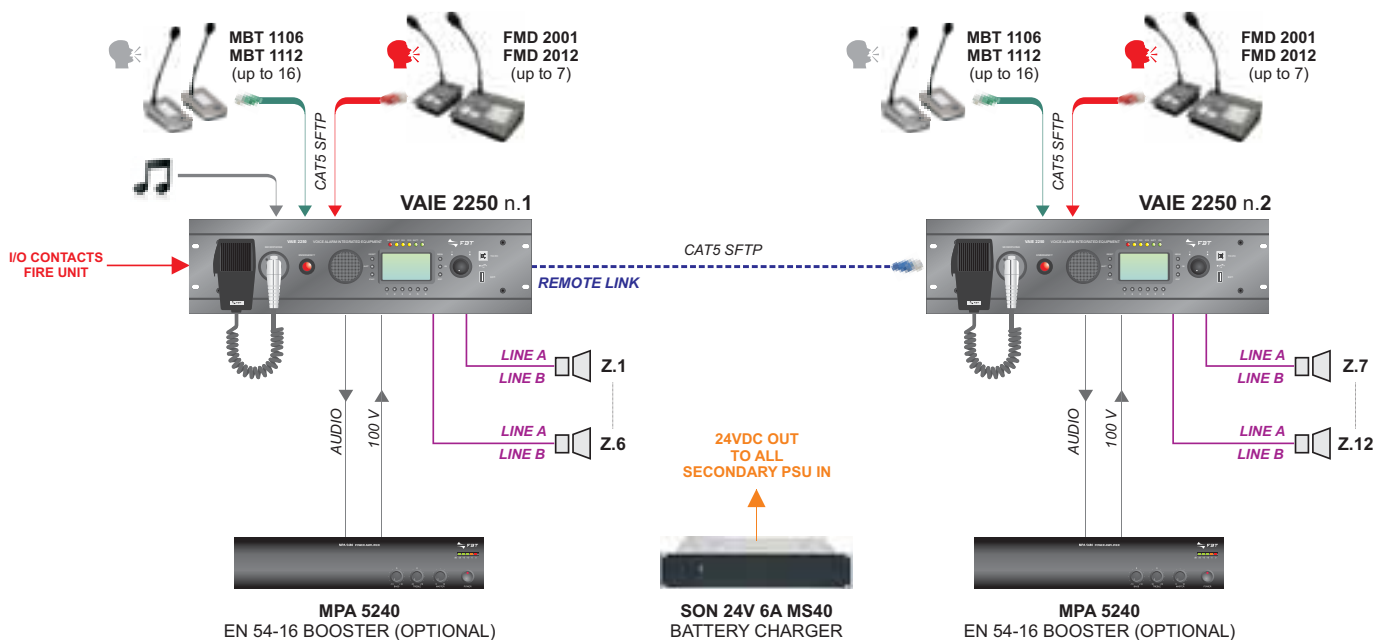
MAIN EMERGENCY FEATURES

- Frontal Fireman's microphone
- Remote emergency microphones units
- Control and monitoring of the integrity of the critical path (from the emergency signal sources to the loudspeaker lines)
- Continuous loudspeaker line monitoring without interruption of BGM or paging calls
- Two output loudspeaker lines for each zone (A & B)
- Built-in message generator unit alarms
- Back-up power amplifier management (built-in unit)
- Complete diagnostic of system fault events

VAIE 2250 Voice Alarm Integrated Equipment

The Fireman Microphone Desktop FMD 2012 and FMD 2001 are fully diagnosed, and allow greater operational and management flexibility for any service and/or emergency calls and/or prerecorded messages on the zones of the system. The LEDs on the front panel provide the main information on the status of the emergency system and on any failures. The FMD 2001 Fireman station enables a single All-Call to be made; if the alarm messages have to be sent to separate zones, it will be necessary to use the FMD 2012 Fireman station, which enables a maximum of 12 zones to be selected. Each station must be completed with an additional microphone to be chosen from among the following models: FMG 2000 (dynamic gooseneck microphone) or FMH 2000 (dynamic hand-held microphone with P.T.T. key)

SOLUTION WITH A MIXED CONFIGURATION



SON24V 6A MS40

EN 54 - 4

Battery Charger

Code 37751



The battery charger **SON24V 6A MS40** (24 Vdc) is intended for a Voice Evacuation System. The battery chargers are microprocessor based devices that have been designed to charge lead-acid batteries (backup batteries connected to the Voice Evacuation System) and, simultaneously, to provide power to auxiliary applications. The battery charger, which is fully compliant with EN54-4 (certificate n. 0333-CPD-075382), offers a maximum charge current of 6 A. It is two rack units (2 U) high, and has to be installed in a 19" rack.

- Fully diagnosed
- Emergency key
- Live emergency calls
- Sending of pre-recorded Evacuation/Alert messages
- Broadcast calls
- Zone-selection keys with status-LEDs (FMD 2012 only)
- Faults/Failures LEDs
- AUX function to call pre-set messages
- Reset of emergency messages
- Muting of the buzzer for failure detection (ACK)

The remote consoles **FMD 2012** and **FMD 2001** are fully diagnosed, and allow greater operational and management flexibility for any service and/or emergency calls and/or prerecorded messages on the zones of the system. The LEDs on the front panel provide the main information on the status of the emergency system and on any failures.

The **FMD 2001** station enables a single All-Call to be made; if the alarm messages have to be sent to separate zones, on the other hand, it will be necessary to use

the **FMD 2012** station, which enables a maximum of 12 zones to be selected.

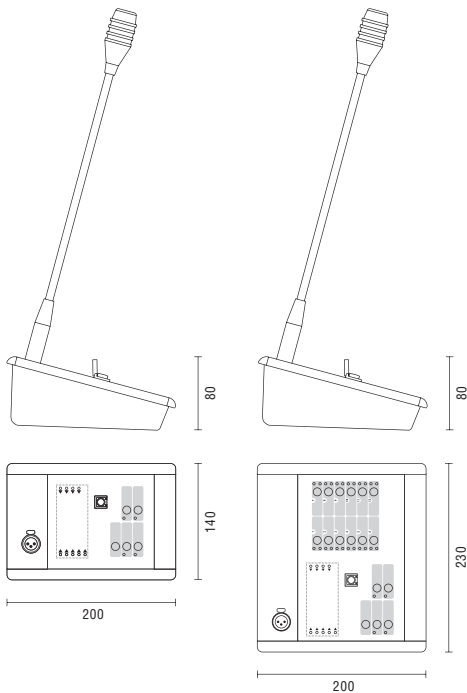
Each station must be completed with an additional microphone to be chosen from among the following models:

- **FMG 2000** Dynamic gooseneck microphone
- **FMH 2000** Dynamic hand-held microphone with P.T.T. key

According to the used system units, it is possible to set-up the PTT and AUX keys and, only for the **FMD 2012**, each of the 12

selection keys in order to enable selection of groups of zones (keys 1 to 12 and the PTT key) or to create a specific combination of messages for the different zones (AUX key).

It is possible to connect up to 7 remote station units in cascade formation by means of the IN/OUT sockets provided for this purpose, which can be used as inputs or outputs as required. The connections to the units are made by means of CAT5e SF/UTP shielded cable and a shielded STP connector.



FMG 2000

EN 54 - 16

Dynamic gooseneck microphone

Code 37488

FMH 2000

EN 54 - 16

Dynamic hand-held microphone

Code 37487

MBT

Broadcasting paging units



Standard paging units can be used in the Voice Evacuation Systems.

	FMD 2001	FMD 2012
Code	37485	37486
N° of zone selectable	-	12
Typical output level	300 mV	300 mV
Frequency response	130 ÷ 19.000 Hz	130 ÷ 19.000 Hz
Distortion	< 1%	< 1%
LOW CUT filter	-3 dB / 380 Hz	-3 dB / 380 Hz
S/N ratio	> 60 dB	> 60 dB
Connections	RJ45 (IN/OUT)	RJ45 (IN/OUT)
Power supply voltage	24 Vdc	24 Vdc
Maximum absorption @24Vdc	60 mA	130 mA
Dimensions (W x H x D)	140 x 80 x 200 mm	230 x 80 x 200 mm
Net weight	0,77 kg	1,55 Kg

**MAD 4IP
HIGH QUALITY
AUDIO**





Have you ever wondered if it could be possible to control music as well as lights, blinds, security system and even temperature from across the room?
And what do you think about possibility to get full control from across the globe?

The future is now: you can start with a simple touch!

FBT Elettronica with Audio Contractor Division takes a big step forward, introducing a brand new system, designed to provide comfort as well as more convenience than you ever thought possible. Customized to fit the specific lifestyle, these solutions range from Multi-Room Music System to full whole Building Automation. If you're moving around your room or around the globe, the system is just as easy to use as you can get a complete control of everything in your hands.

MAD 4IP - Multimedia Automation Distribution over IP Networks



MAD 4IP
High Quality Audio



MMU4000



CUW4000



CUD4000



EAC4000

MAD 4IP will catalog your entire collection and you can add music to every room with the touch of your finger: you can play the same song in every room or different songs in different rooms, the choice is yours.

MAD 4IP will give you instant access to the world of music, no matter where it comes from: MP3 or Tuner or Internet Radio from your computer or your MP3 player or your SD card or your USB memory key.

Multi-Room Multi-Source application - combination of streaming of Digital Music with Building Automation

For instance lighting and music control can be integrated in scenes, which can be selected at the push of a button from anywhere in the building. Audio streams are transmitted over IP networks or wireless networks, from a main server to music players and in turn controlled with a web based visualization. Thanks to the Graphical User Interfaces in a web page, you can control all room functions completely intuitively with a touch screen: lighting scenario, automatic lowering of blinds, music in every room, door communication, heating, ventilation and air-conditioning systems and even irrigation. With a customized control of the building it's possible an intelligent management of all these functions, assuring time and energy saving.

Your smartphone or tablet will be converted into your universal remote control.



MMU4000

Multimedia MASTER UNIT
cod. 34553

- Reduced dimensions
(WxHxD) 360 x 88 x 216 mm
- 1 serial interfaces RS 232
- 6 usb 2.0 ports
- Ethernet
- Temperature Range 0-50°
- Power supply 230V
- Consumption 45W
- Stand alone or rack mounting with included brackets
- Automatic start up in case of power failure
- 2 Audio line-in
- 2 audio Mic/line in with gain, and tone control (Low and High)
- 48V phantom for microphone input with switch)

MMU4000 is the Multimedia Master Unit, a complete Multi-Room Music System, integrating music/video source components and user interfaces, providing you with one-touch entertainment throughout the building. MMU4000 is the simple, economic solution for distributing music and video in streaming. It's a totally modular system, configurable via software, versatile and easy to use. MMU4000 is a compact, independent unit that

reproduces and manages audio files in the most popular formats Mp3 and WAV from hard disk –all in streaming on standard IP network, using the RTP protocol, Real Time Protocol, controlled by a web based supervision software, from touch-screens or from management devices distributed over the various areas. MMU4000 can be integrated into the building automation installation to offer high quality music in any room. It can be upgraded with 3 different software license, adding also the complete integration of Music streaming with Building Automation System.

OPTIONAL SOFTWARE LICENSE for MMU4000

BAL (Building Automation Light)

With this software license option, the Multi-Room Music System is combined with a Building Automation System, with a standard web Interface, 2 simultaneous users, 2 selectable skins, 2 scenarios, 8 control points with MODBUS protocol, 2 configurable environments.

BA1 (Building Automation 1 Driver)

With this software license the Multi-Room Music System is combined with a Building Automation System, with a standard web Interface, 1 driver included and chosen among several protocols, 150 control points.

BA3 (Building Automation 3 Driver)

With this software license the Multi-Room Music System is combined with a Building Automation System, with a standard web Interface, 3 drivers included and chosen among several protocols, 300 control points, 3 simultaneous users, no limit to configurable environments and elements for environment, IP security cameras visualization, selectable skins.



CUW4000

Control Unit wall mounted
cod. 34555

CUW4000 Control Unit is a fully configurable, 7" touch panel featuring a contemporary, thin elegant design that complements the aesthetics of any environment. The CUW4000 has a 800x480 resolution and incorporates 48VPoE - Power over Ethernet, allowing the touch panel to receive its power via the Ethernet connector. CUW4000 can receive audio input signals over standard CAT 5 cable. It's equipped also with an additional jack input for external players and with a USB port for an external USB key for MP3 file local reproduction. This enhanced connectivity provides integration flexibility. One or more touch panels can be installed, depending on your own needs or to make the management of the building automation system available from different areas.

It's equipped with:

- 1 USB for pen drive
- 1 Lan port (with 48V POE)
- 1 Stereo Inne-in
- 2 balanced audio out
- Power supply connector : 12V
- Power : 6.5W on and 3W standby

FEATURES

- 7-inch color LCD touch panel Full-color video monitor/in-wall
- 16:9 aspect ratio Controls
- Non-volatile flash memory

Connections

- System Port (RJ-45)
- Wiring Requirements Cat-5 (data),
- Display 7" Diagonal, 16:9 Color TFT LCD Resolution 800 (W) x 480 (H)
- Frame Dimensions (WxHxD) 280 x 175 x 6 mm
- Cutout Dimensions Approx. 265 x 170 x 72mm



EAC4000

Ethernet Audio Card
Cod. 34556

EAC4000 is the complete audio Ethernet card. It's used to stream the audio signals into the IP network, to be used when it's not necessary a display, because it's used a PC or a smartphone. It has the same features of CUW4000, without LCD display.

- Dimensions: 225 x 105 x 30 mm
- Power Supply : 3W



OPTIONAL:

- External Power Supply 12V 1A for CUW4000, CUD4000 and EAC4000, when PoE is not available.

CUD4000

Control Unit Desktop
Cod. 34554

CUD 4000 has the same features of CUW 4000 but sits on a tabletop and it's equipped with a gooseneck microphone for paging announcements.

- Dimensions: 320x 172 x 57 mm

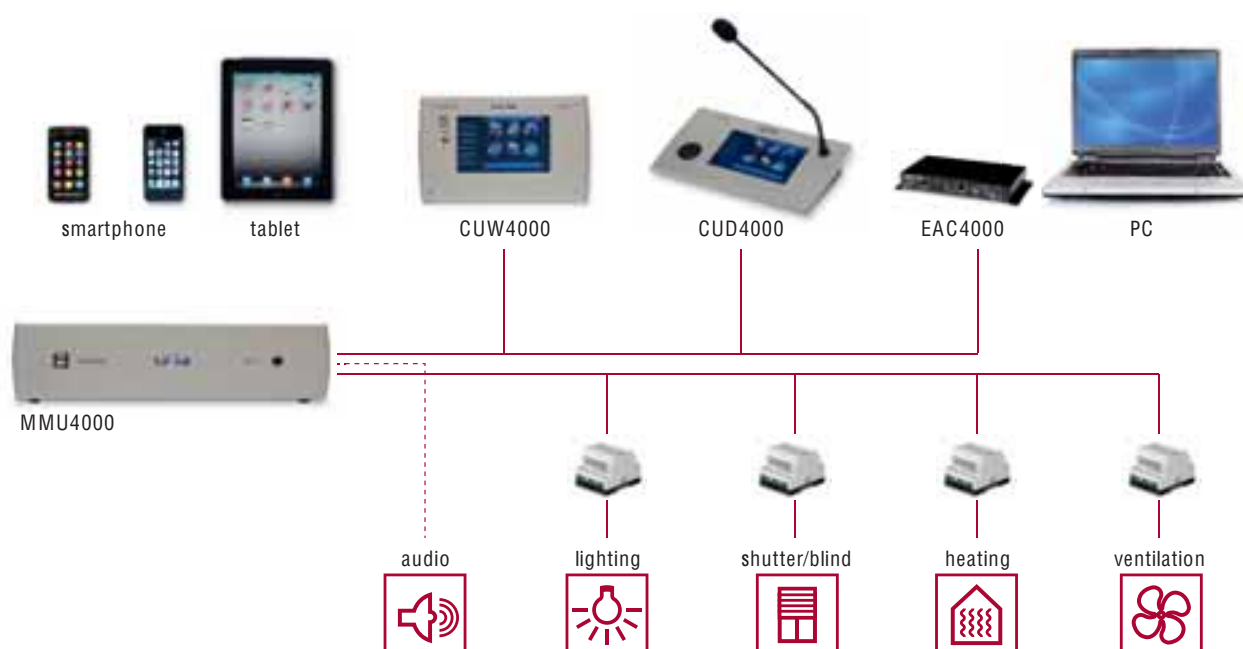


MAD 4IP
High Quality Audio



MMU4000 Rear Panel:

- 1 serial interfaces RS 232
- 4 USB 2.0 ports + 2 USB 2.0 ports on front
- Ethernet port
- 2 Audio line-in
- 2 audio Mic/line in with gain and tone control
- 48V phantom for microphone input



KEY FEATURES:

- Web based application : you can use any device with an Internet Browser on board, so you can get full control from your PC, as well as from any smartphone or any tablet PC, that could be converted into your universal remote control. No need to install any software or to download any applet, with no compromise features and with reaction to commands in real time.
- Independent from BUS: you can have 3 different drivers selectable among the following: KNX, Modbus TCP, Modbus RTU, IP Camera and many others
- 3 simultaneous web user
- Unlimited number of scenarios
- Simultaneous management of 300 control points
- Selectable graphic skins
- MAD4IP MAP management of the entire building automation system through images of the ambient: it'll be possible to have layout or images of the rooms and to manage the controls through icons, directly in the visualized ambient. With this module MAD4IP MAP it will be possible also to look at IP camera video, in real time, keeping under control the security of all the environments.



CONFERENCE SYSTEMS AND INTERCOM SYSTEMS

*Sound Design Project
for Council Chamber - Pescara*

FBT AC CS 1CU

CONTROL UNIT

FBT AC CS 1DU

MICROPHONE CONSOLES

FBT AC CS 1CH

The innovative design makes the CS series more than just another conference system. With its ECM capsule, intelligent automatic mixing technology and integrated acoustic and mechanical system, the conference system provides turnkey solution with natural, feedback-free audio performance whatever the environment. This conference system is ideal for conferences up to 150 attendees. The system is composed of 1 central unit and up to a maximum of 150 chairman or delegate console.

Control unit Code 27510

- Controls the chairman and delegate microphones as well as the connections to other audio inputs and outputs
- Self-powered

Delegate microphone base Code 27512

- Provides the facility for the user to take part in the conference via the gooseneck microphone, a PTT ON/OFF switch is provided as is an internal loudspeaker and an external earphone socket
- Flexible condenser microphone
 - Diameter without microphone 170x115x90mm
 - Microphone length 400mm
 - Net weight 1100g

Chairman microphone base Code 27511

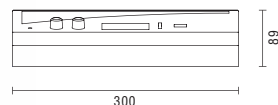
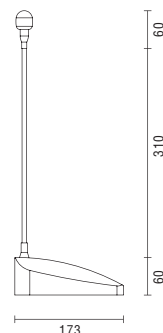
It has the same features of the CS DU model, but with the following difference:

- A priority switch allowing the chairman to control the conference by muting temporarily or completely clearing all active delegate microphone units



CS1-CH

CS1-CU



FBT AC D7P

Cables

Model	Code	Dimensions
FBT AC D7P-10	37648	10 mt
FBT AC D7P-20	37649	20 mt
FBT AC D7PDH-1	37650	

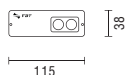
CONFERENCE SYSTEM CS SERIES

Voltage	Vac 100 ~ 264, 50/60Hz	
DC supply to contribution units	±15V ±1V	
	Line, Telephone and Insertion-unbalanced	
Input sensitivity	-14dBV/+11dBV (nominal/maximum)	
Input impedance	33Kohm	
Output level	14dBV/+11dBV (nominal/maximum)	
Output impedance	500ohm	
	Tape Recorder-unbalanced	
Input sensitivity	-20dBV/+5dBV (nominal/maximum)	
Input impedance	47Kohm (for L & R channel)	
Adjustment	-20dBV/+5dBV	
Output level	+0/-30dB	
Output impedance	500ohm	
	External Microphone input-balanced	
Input sensitivity	-56dBV	
Adjustment	+6dBV/-6dB	
Power supply Phantom	12V±1V, 2*680ohm (±2%)	
	Headphone Output	
Output level	-8dBV/+2dBV	
Allowed Impedance	22ohm	
	Gooseneck Microphone	
Type	Back Electret Condenser	
Frequency Response	50 ÷ 18000Hz	
Polar Pattern	Cardioid	
Max. SPL for 1% THD	125dB	
Gooseneck Length	400mm (15")	
	CS-1CU	CS-1CH e CS-1DU
Dimensions (WxHxD)	300x89x150mm	115x60x173mm
Dimensions	-	400mm (15")
Weight	1745gr	1100gr

FBT AC EXM-1

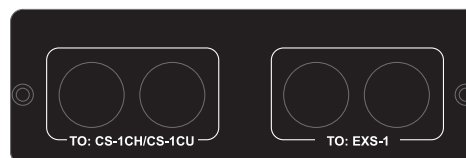
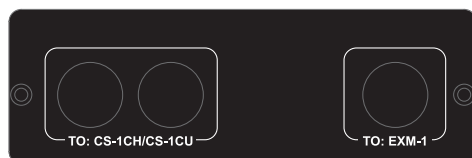
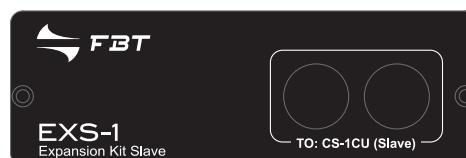
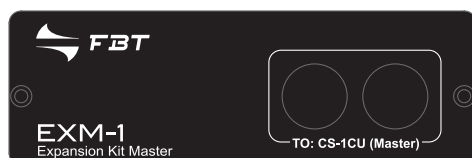
FBT AC EXS-1

EXPANSION KIT

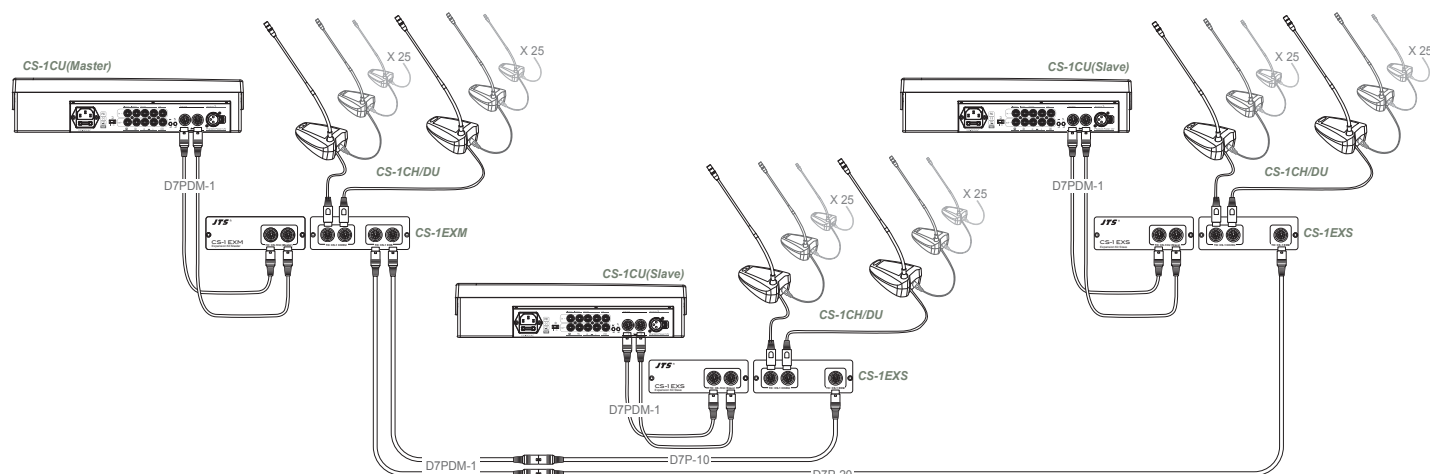


FBT AC expansion kit, combined with D7PDM-1 extension cables, can expand the number of using units of conference discussion system from 50 to 150 by adding maximum two additional FBTA CS-1CU functioning as power

supply units only. The system is controlled by the master FBTA CS-1CU unit. Using D7P-10 or D7P-20 extension cables to extend the operation distance.



	FBT AC EXM -1	FBT AC EXS-1
Code	37646	37647
Input	7-pin DIN Connector	
Output	7-pin DIN Connector	
Dimension(mm)	115x65mmx38mm	



INTERCOM 1300

MICROPHONE INTERCOM SYSTEM

Installed in different rooms the intercom system allows users to speak and listen at each end without having to press any buttons. The kit is composed of three separate modules: control station, power supply, and loudspeaker unit with integral microphone. The devices function in half-duplex (one-at-a-time) mode and activation thresholds are modified automatically in relation to environmental background noise levels. The operator station can enable one-way operation, i.e.

exclusively automatic listening, with speak facility at the press of a button.

Intercom 1300 composed of:

- **SIBK 013** control station,
- **AASL 012** power supply,
- **SICK 012** loudspeaker-microphone enclosure with connection cable

Optional:

- **SICK 013** supplementary loudspeaker for operator station
- headset with microphone for operator station



INTERCOM 1300	
Code	18083
Power supply	220 Vac, 50 Hz
Power input	16VA
Power input	1W
External loudspeaker impedance	8ohm
Bases dimensions	220x157x55mm
Flex cable and microphone length	358mm
External loudspeaker dimensions	110x64x54mm (bracket excluded)

MICROPHONES MICROPHONE BASES WIRELESS MICROPHONES

*Sound Design Project
for reception hall and conference centre
(Villa Foscari-Cornaro - Gorgo al Monticano, TV)*

- **Settings:**
 - 4 reception rooms (approx. 200 m²)
 - 4 rooms (approx. 25 m²)
 - 1 outdoor arcade
- **Requirements:**

Sound amplification system designed for conferences, banquets and receptions 9 independent zones, 3 of which are main
- **Preamplifier equipment:**
 - 3 MMZ8004 mixers featuring 4 output buses
 - 1 MZU2008 zone selector
- **Power amplifiers:**
 - 2 MCA4240A multi-channel power amp.
- **Loudspeakers:**
 - 42 STUDIO4/WT loudspeakers, 2-way, 60 W RMS and loudspeakers from the FBTMaxX range
- **Microphone bases:**
 - 1 MBT8008 unit for announcements in individual zones and generating automatic alarm messages
- **Wireless microphones:**
 - 4 WM-505 wireless microphones

MD-S 1100

MD-S 1300

HAND-HELD MICROPHONES

MD-F 5044

MC-F 5042

GOOSENECK MICROPHONES

Dynamic microphones cardioid

- ON-OFF switch
- Male XLR connector
- Anthracite grey body
- Black mesh and antipop filter
- High performance
- High-quality voice reproduction
- Low distortion
- High resistance to knocks
- Special cartridge suspension mount to isolate the microphone from handling noise
- Ideally suited for speech applications

Dynamic microphones percardioid

- ON-OFF switch
- Male XLR connector
- Anthracite grey body
- Black mesh and antipop filter
- High performance
- High-quality voice reproduction
- Low distortion
- High resistance to knocks
- Special cartridge suspension mount to isolate the microphone from handling noise
- Ideally suited for singing applications

Dynamic microphones cardioid with gooseneck

- Male XLR connector
- Low reflectivity black finish
- Outstanding directional characteristics
- Ideal for:
 - hotels
 - shopping centres
 - churches
 - conferences
 - offices

Electret microphone with gooseneck

- Male XLR connector
- Low reflectivity black finish
- Outstanding directional characteristics
- Ideal for:
 - auditoriums
 - shopping centres
 - conference halls



	MD-S 1100	MD-S 1300
Code	10040	10042
Characteristics	Dynamic	Dynamic
Directivity	Cardioid	Hiper-Cardioid
Frequency Response	80Hz±13 kHz	50Hz±18 kHz
Sensitivity (0dB-1V/micro bar,1000 Hz)	-75dB±3dB	-72dB±3dB
Output impedance	500ohm	250ohm
Material	Zamak	Zamak
Weight	220 g	359 g
Dimensions	ø 54x175mm	ø 54x187mm
Accessories included	Stand SU30	Stand SU30
Microphone cables (optional)	CI-M 5 X CI-M 5 D CI-M 5 J	CI-M 5 X CI-M 5 D CI-M 5 J

	MD-F 5044	MC-F 5042
Code	10045	10044
Characteristics	Dynamic	Electrete
Directivity	Cardioid	Cardioid
Frequency Response	80Hz±16 kHz	80Hz±16 kHz
Sensitivity (0dB-1V/micro bar,1000 Hz)	-68dB±3dB	-68dB±3dB
Output impedance	500ohm	250ohm
Power supply	-	Phantom 9:52 Vdc
Weight	215 g	135 g
Dimensions	ø 29x438mm	ø 19x424mm
Accessories included	Stand SU30	Stand SU30

Dynamic microphones cardioid with gooseneck

- Push-to lock switch
- Male XLR connector
- Low reflectivity black finish
- Outstanding directional characteristics
- Ideal for:
 - hotels
 - shopping centres
 - churches
 - offices

Dynamic microphones cardioid with gooseneck

- Same characteristics as the MD-F 5045 S with push-to-talk switch
- Code: 15294



	MD-F 5045 S	MD-F 5045 SI
Code	10046	15294
Characteristics	Dynamic microphone with push-to lock switch	Dynamic microphone with push-to-talk switch
Material	-	-
Directivity	Cardioid	Cardioid
Frequency Response	100Hz±12 kHz	100Hz±12 kHz
Sensitivity	-77±3dB (0dB-1V/micro bar, 1000 Hz)	-77±3dB (0dB-1V/micro bar, 1000 Hz)
Output impedance	500ohm	500ohm
Weight	315 g	315 g
Dimensions	ø 29x440mm	ø 29x440mm

MS 30 BK**Floor stand**

Code 18245
Adjustable floor stand

ASG 230**Boom arm**

Code 11864
Boom arm for MS 30 BK microphone stand

TB 30 BK**Table microphone stand**

Code 18248
Adjustable table microphone stand

SU 30**Universal clamp-on**

Code 11586
Universal hand-help microphone clamp-on

CM 601

CONDENSER MICROPHONE

Low profile panoramic microphone, electret condenser

- On/off switch,
- The switch can be programmed for the push on/off, push/ to talk, push/to mute functions
- LED indicator
- Three-position low cut switch, minimizing mechanical noise
- 3 pin Mini XLR-M output connector
- 36-52 VDC Phantom Power, 88 g net weight
- Specially suitable for conference tables, altars and stage floors

**FBTAC GM 5206 L - 5212 L - 5218 L**

CONDENSER MICROPHONE

Condenser microphone

- XLR connector



	CM 601
Code	27516
Characteristics	Electret Condenser
Directivity	Half-Cardioid
Frequency Response	30Hz±12.000 Hz
Sensitivity (0dB-1V/micro bar,1000 Hz)	-53dB±3dB
Low Frequency Roll-off	80Hz, 120Hz
Output impedance	100ohm
Max SPL	125dB at 1kHz
Signal to noise ratio	67dB
Power supply	Phantom 36÷52 Vdc
Power consumption	≤6mA
Switches	Push control: on/off Function selection: push on/off, momentary on, momentary off Low cut: low frequency roll-off
Output connector	3P Mini XLR-M type
Weight	88 g
Dimensions	72x110mm

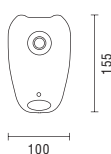
	FBTAC GM 5206L	FBTAC GM 5212L	FBTAC GM 5218L
Code	27515	27514	27513
Characteristics	Electret Condenser		
Directivity	Super Cardioid		
Frequency Resp.	80Hz±18.000 Hz		
Sensitivity	(1000 Hz) -60dB (1mV)		
Output impedance	220ohm		
Max SPL	125dB		
over 1% THD			
Phantom Power	36-52Vdc		
Output connector	XLR		
Dimensions	FBTAC GM5206L 152mm (6") FBTAC GM5212L 305mm (12") FBTAC GM5218L 457mm (18")		

FBTAC ST 5050

MICROPHONE BASES

Universal microphone base

- Both phantom power and 9V battery power supply
- On/off switch with possible push/to talk, push/to mute



	FBTAC ST 5050
Code	27499
Frequency response	20Hz÷20.000 Hz
Stand-By power consumption	1mA
Operating power consumption	2.07mA (BAL), 1.34mA (UNBAL)
Switches	Microphone selection: ECM MIC unbalanced input, ECM MIC balanced input, Dynamic MIC input
Connectors	Unbalanced and balanced audio input (XRL 3P Female) Unbalanced and balanced audio output (XRL 3P Male)
Weight	0,82 Kg
Dimensions	100x155mm

FBTAC ST 850

MICROPHONE BASES

Microphone base

It is automatically set to be wired or wireless, adding the transmitter and receiver

- On/off switch
- The base operates with power transmitters and it is compatible with FBTAC-PT-850B transmitters
- Where wireless transmitters not available, it will be enough to connect ST850 to a microphone cable with Phantom power supply: it will function as a standard flexible microphone



	FBTAC ST 850
Code	27500
Features	Back Electret Condenser
Frequency response	50Hz÷18.000 Hz
Directivity	Supercardioid
Output level (at 1,000 Hz)	Wireless -66±3dB (1.58mV) 0dB=1V/bar Wired -56±3dB (1.58mV) 0dB=1V/μ bar
Impedance	Wireless 2kΩ Wired 100Ω
Max SPL for 1% THD	125dB
Power supply	Wireless 5VDC Wired 12-48 VDC phantom power
Power consumption	Wireless ≤0.5mA Wired ≤0.5mA
Output connector	Wireless 4P <mini XRL Wired 3P XRL (M)
Switches	Push control on/of
Cable lenght	305mm
Weight	1 kg
Dimensions (WxHxD)	100x65x150mm

MB-T 6400 S

DESK MICROPHONE BASE

Desk base with ON/OFF switch, flexible gooseneck with cardioid dynamic microphone

- 5 metre cable with male XLR connector and 2 conductors for priority activation (ding-dong)



	MB-T 6400 S
Code	28840
Features	Dynamic
Directivity	Cardioid
Frequency response	100Hz÷12 kHz
Sensitivity (0dB-1V/micro bar,1000 Hz)	-75dB±3dB
Output impedance	500ohm
Material	Zamak
Weight	1750 g
Dimensions (WxHxD)	160x98x45mm

BF-T 5043 L

MICROPHONE BASES WITH GOOSENECK AND SWITCH

Desktop base with ON-OFF switch, gooseneck and cardioid electret condenser microphone

- Complete with a 5-metre cable fitted with a male XLR connector and 2 wires for the activation of the chime priority
- Die-cast zinc base
- Lamp ring
- Touch-switch
- Ideal for all applications, especially for
 - churches
 - conference halls



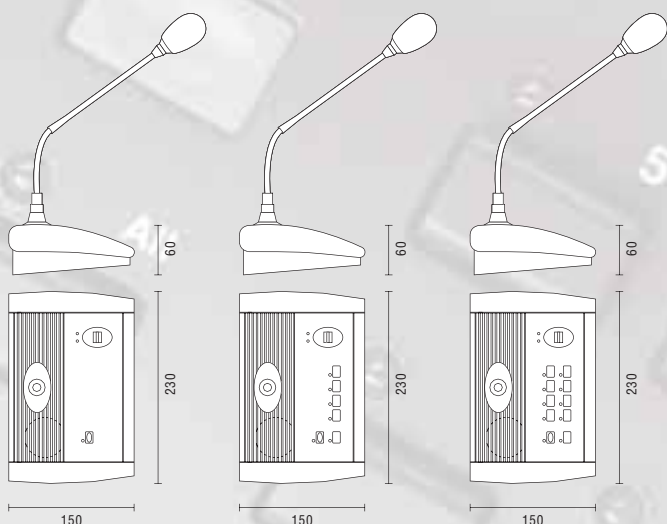
	BF-T 5043 L
Code	18322
Features	Electrete
Directivity	Cardioid
Frequency response	70Hz÷18 kHz
Sensitivity (0dB-1V/micro bar,1000 Hz)	-59dB±3dB
Output impedance	250ohm
Power supply	Phantom 12÷48 Vdc
Material	Zamak
Weight	786 g
Dimensions (WxHxD)	145x100x36mm

MB-T 8001

MB-T 8004

DESKTOP BASES

MB-T 8008



The microphone bases in the MB-T 8000 series feature a plastic body with a metal base. These products stand out for their high sensitivity and wide frequency response and the microphones feature a cardioid polar curve. The bases are equipped with a functional 3-position switch, ON push-to-lock, OFF and push-to-talk ON as well as an emergency button.

- Pre-amplified (output 0dBu)
- Dynamics compressor to ensure optimal level of clarity
- Internal message generator to indicate the start and end of microphone messages and for an emergency signal.
- Option to control priority (music off)
- Management of 4 or 8 zones independently, depending on the model, and general calls
- For the management of a larger number of zones, upon request



AL 8000 Power Supply



Code 17074

Power Supply +15/-15V for pre amplified microphone bases of MB-T8000 series

STH 022 Multipair Shielded cable

Model	Code	Dimensions
STH 02-022	13360	2x2x0,22
STH 05-022	13103	5x2x0,22
STH 09-022	13104	9x2x0,22

	MB-T 8001	MB-T 8004	MB-T 8008
Code	19543	11828	12122
Features	Base with switch, emergency button	Base with switch, 4-zone selection, emergency button	Base with switch, 8-zone selection, emergency button
Microphone	Electret	Electret	Electret
Polar curve	Cardioid	Cardioid	Cardioid
Frequency response	70Hz ÷ 18KHz	70Hz ÷ 18KHz	70Hz ÷ 18KHz
Sensitivity	-63dB± 3dB	-63dB± 3dB	-63dB± 3dB
Output impedance	600ohm	600ohm	600ohm
Gooseneck	L=370mm ø 9mm	L=370mm ø 9mm	L=370mm ø 9mm
Warning/emergency signals	CHIME:2Tones CHIME:4Tones Emergency	CHIME:2Tones CHIME:4Tones Emergency	CHIME:2Tones CHIME:4Tones Emergency
Output voltage	0dBu (0,775Vrms) balanced	0dBu (0,775Vrms) balanced	0dBu (0,775Vrms balanced)
Power supply	±15Vdc/80mA	±15Vdc/80mA	±15Vdc/100mA
Material	Plastic with steel base	Plastic with steel base	Plastic with steel base
Accessories included	Antipop filter	Antipop filter	Antipop filter
Optional accessories	Multipair Shielded cable 5x2x0.22 STH05-022	Multipair Shielded cable 5x2x0.22 STH05-022	Multipair Shielded cable 9x2x0.22 STH09-022

MBT 1101

PRE-AMPLIFIED BASES

ABS structure with electret microphone and stem with a flexible section at the bottom. Equipped with one hold-down (PTT) call key, one toggle (LOCK) call key for long messages and a LED signalling activation of the microphone. The bases can be mixed with one another or interlocked with two priority levels. The level of the microphone signal and that of the alerting signal (chime generator included) are adjustable from the rear.

MBT 1101 microphone stations can be used simply and rapidly with the amplifiers of the MPA 5000, MXA 1000, MXA 3000 and MDS 6000 range.

It is essential to use CAT5e SF/UTP shielded cables (IN input UNITS), and it is possible to connect up to 6 microphone stations in cascade fashion. The output level can be adjusted by means of the appropriate rear-panel control (LEV).

MBT 1106

Standard paging units can be used in the Voice Evacuation Systems. The units are connected to one another in cascade formation, and the connecting cables (CAT5e SF/UTP) carry both the analogue

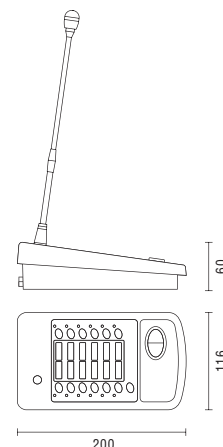
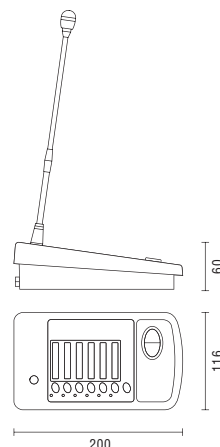
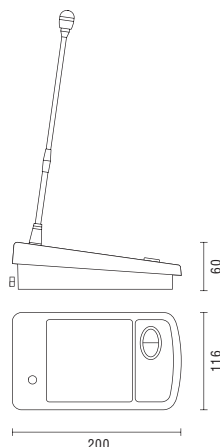
MBT 1112

BROADCASTING PAGING UNITS

audio signal and the digital signal for the controls and station addresses. **MBT 1106** call station can make selective calls to up to a maximum number of 6 zones and the **MBT 1112** up to 12.

MBT 1112E

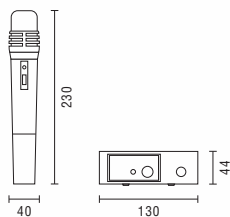
The **MBT 1106E** extension module enables 12 programmable shortcut keys for one or more functions to be added. It is possible to connect up to two expansion modules to the MBT 1112.

**CV 2010**

Cable

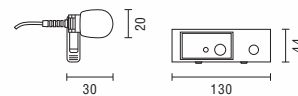
Code 35541

	MBT 1101	MBT 1106	MBT 1112	MBT 1112E
Code	37739	37492	37493	37494
Type	Electret	Electret	Electret	-
N° of selectable zones	-	6	12	12
Power supply	12 Vcc / 24 Vcc	18 Vcc / 36 Vcc	18 Vcc / 36 Vcc	-
Absorption @ 12 Vdc	40 mA	-	-	-
Absorption @ 24 Vdc	50 mA	16 mA	22 mA	20 mA
Frequency response	100 ÷ 15.000 Hz	100 ÷ 14.000 Hz	100 ÷ 14.000 Hz	-
Speech filter @100 Hz	-	-10dB	-10dB	-
Audio output level	-	2,2 Vmax	2,2 Vmax	-
Audio level adjustable	1,2 Vrms (balanced)	-	-	-
Warning signal level (chime) adjustable	0,8 Vpp	-	-	-
Dynamic limiter	yes	yes	yes	-
Dimensions	116x60x200 mm	116x60x200 mm	116x60x200 mm	116x60x200 mm
Weight	0,82 Kg	0,58 Kg	0,60 Kg	0,50 Kg



Design philosophy and technology aimed at guaranteeing optimal quality and reliability with high level performance. Receiver with SWITCHING DIVERSITY technology, to ensure signal

selection at all times at the radio frequency with the best intensity, thereby ensuring top quality and reproduction stability in sound amplification systems.

**LM - 10****Lavalier microphones****Code 13544**

Lavalier microphones have electrical and mechanical characteristics to guarantee reproduction of clear and intelligible speech for the entire system. The compact dimensions and weight ensure use in all cases where the utmost freedom of movement is indispensable.

HM - 26**Headset microphones****Code 13543**

Headset microphones have electrical and mechanical characteristics to guarantee reproduction of clear and intelligible speech for the entire system. The compact dimensions and weight ensure use in all cases where the utmost freedom of movement is indispensable.

AVL 606**Microphone****Code 14142**

As well as the characteristics of the other two models, this microphone features special sweatproof protection to enable use in all applications subject to high levels of humidity or perspiration. (Typical applications include gymnasiums, swimming pools, camp sites etc.).

	WM 505/...	WM 705 A/L
Code	11573 175 Mhz	14827 181 Mhz
	11574 214 Mhz	14828 203 Mhz
	14922 204 Mhz	
	14923 212 Mhz	
	14924 203 Mhz	
Transmitter type	Hand-held	Lavalier and Headset
Audio band	50 Hz-15 Khz	50 Hz-15 Khz
Microphone type	Dynamic	Electret
Directivity	Cardioid	Cardioid
Power RF	10mW	5mW
Power supply	1,5V (AA, E91, LR6, AM3 Alkaline)	3V (2 x AAA, Alkaline)
Absorption	60mA	25mA
Duration	Tipico 12 ore	Tipico 12 ore
Weight	210 g	100 g
Operation	SW Diversity Quartz-controlled	SW Quartz-controlled
Antenna	2	2
Power supply	12/18V external	12 V dc/300 m A with power supplier
Squelch	Adjustable	Adjustable
Audio Output	0:300mV	12V dc/300 m A 0:300mV
Weight	0,9 Kg	0,9 Kg

FBTAC US 8001D

FBTAC Mh 750

FBTAC US 902D

FBTAC Mh 920

WIRELESS MICROPHONES UHF

UHF PLL true diversity receiver

- Suitable for 1 transmitter (FBTAC Mh 750, FBTAC Mh 920, FBTAC PT 850 B)
- Preset with 16 selectable UHF channels (782MHz-806MHz)
- Diversity technology preventing from signal losses in RF links
- Noise Mute e and pilot tone squelch circuit to avoid interferences
- Balanced and unbalanced XLR outputs
- 1/2 U rack metal chassis

**Microphone with UHF PLL transmitter
Code 27494**

- 16 selectable channels
- Frequency band: 782MHz - 806MHz
- Advanced circuits guaranteeing stable transmission signals
- Squelch tone-key
- Wide dynamic range and flat frequency response
- Internal antenna, lightweight hard plastic case

UHF PLL true diversity receiver

- Preset with 16 selectable UHF channels (782MHz-806MHz)
- Suitable for 2 transmitters (FBTAC Mh 750, FBTAC Mh 920, FBTAC PT 850 B)
- Diversity technology preventing from signal losses in RF links
- Noise Mute e and pilot tone squelch circuit to avoid interferences
- LCD Display
- Balanced and unbalanced outputs
- 1 U rack metal chassis

**Microphone with UHF PLL transmitter
Code 27496**

- 16 selectable channels
- Frequency band: 782MHz - 806MHz
- Advanced circuits guaranteeing stable transmission signals
- Wide dynamic range and flat frequency response
- Advanced circuits and squelch key avoiding interferences
- Internal antenna
- Suitable for condenser or dynamic cartridge
- LOCK-ON function to avoid accidental interruptions



FBTAC Mh 750



FBTAC US 8001D



FBTAC Mh 920



FBTAC US 902D

FBTAC PT 850B

Body pack transmitter**Code 27495**

- 16 selectable channels
- Frequency band: 782MHz -806MHz
- AA battery supply
- Featuring 4P mini XLR connector
- Hard and solid plastic case
- Compatible with lavalier and boom microphones
- LED display, designed for waist carrying

FBTAC CM 501

Lavalier microphone**Code 27497**

Lavalier unidirectional cardioid condenser microphone 4P mini XLR connection, frequency response 100-15,000Hz; Sensitivity (at 1,000Hz): -60 ± 3 dB* (1mV)*0dB=1V/ μ bar, 1k Ω ; Impedance 2.2Kohm; wide dynamic range and excellent frequency response; small size for low visibility; including the clip for easy hanging on ties, suits, lapels. Net weight: 21.5 gr.

FBTAC CX 504

Cardioid microphone**Code 27498**

Cardioid condenser boom microphone; perfect for voice. 4P mini XLR connection, frequency response 30-18,000Hz; Sensitivity (at 1,000Hz): -68 ± 3 dB* (0.4mV)*0dB=1V/ μ bar, 1k Ω ; impedance 680Kohm; excellent pre-feedback gain and noise insulation; light weight enabling free movement; ergonomic design guaranteeing wearing comfort; Net weight: 56.3 gr.

	FBTAC US 8001 D	FBTAC US 902 D
Code	27493	27492
RF FREQUENCY Range	782MHz-806MHz	782MHz-806MHz
Oscillation Type	PLL	PLL
Channel	16	16
Frequency response	50Hz-18kHz	50Hz-18kHz
Bandwidth	24MHz	24MHz
Operating range	100 M	100 M
Receiver mode	Diversity	Diversity
Signal/Noise Ratio	>100dB	>100dB
Sensitivity RF	-107dBm (12dB S/N AD)	-107dBm (12dB S/N AD)
Display	LED	LCD
Controls	On/Off, volume, channel Up/Down	On/Off, volume, channel Up/Down , Squelch level
Audio Output Level	-12dB	-12dB
AF Output Impedance	600ohm unbalanced	2,2Kohm unbalanced
Squelch	pilot tone and Noise Mute	pilot tone and Noise Mute
Operating voltage	12-18VDC, 600mA	12-18VDC, 600mA
Outputs	1 balanced XLR and 1 unbalanced Jack 6,3mm	2 balanced XLR and 1unbalanced Jack 6,3mm
Dimensions (WxHxD)	221x40x152mm	480x45x232mm

	FBTAC Mh 750	FBTAC Mh 920
Code	27494	27496
Frequency Deviation	+/-48KHz	+/-48KHz
S/N	>100dB (1kHz - A)	>100dB (1kHz - A)
Current consumption	100mA	100mA
LCD / LED indicators Power	On/Off Power Battery Level	On/Off Power Battery Level
Batteries	2xAA 1,5V	2xAA 1,5V

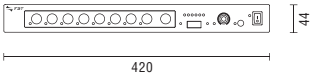


**PREAMPLIFIER EQUIPMENT
CONTROL UNITS AND
MIXERS
POWER AMPLIFIERS
RACKS
MUSIC SOURCES
AMPLIFICATION
EQUIPMENT**

*Sound Design Project
for World Trade Center
(Zaragoza)*

FBT AC MX-8

AUTOMATIC MICROPHONE MIXER



The microphone automatic mixers provide great convenience to sound reinforcement installation with any size and any combination. full feature design includes

- Daisy-chain with unlimited number of the mixer
- Three operation modes: one-channel-at-a-time, all active or override
- Switchable output levels between mic. and line level
- Individual gain control and phantom power for each

channel

- Last in stays on for continuous ambience sound
- Control voltage provided to trigger external device such as a speaker switching and camera switching

The outstanding performance enables effective managing of multi-microphone installation including corporate boardrooms, conference rooms, government builds, houses of wokship, classrooms



D8P-1

Extension cable

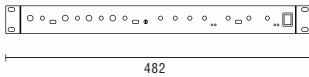
Code 37936

- Din 8 Pin Male/Male Cable
- Lenght 0,8 m

	FBT AC MX-8
Code	37645
Type	XLR
Mic	4.7Kohm
Line	20Kohm
Output	
Type	XLR
Mic	300ohm
Line	200ohm
MAX Output Level	>17dB
MAX Gain	>70dB
Frequency Respond	35~20,000 Hz
THD%	<0.06%
Signal-to-noise radio	>70 dB
Input Attenuation	-50dB
Phantom Power	+48V
Mic In Attenuation	-10dB / -20dB
Mic Attenuation	-10dB / -15dB / -20dB
Output Attenuation	-50dB
Voltage Output	+4VDC ±0.3V
Power Supply	18VDC, 1A
Power Consumption	13.5W
Fuse	T0.5AE 250V (Slow-Blow)
Weight	2.25 kg
Dimensions	420x44x198.5mm

M 12X4

PREAMPLIFIER MIXER



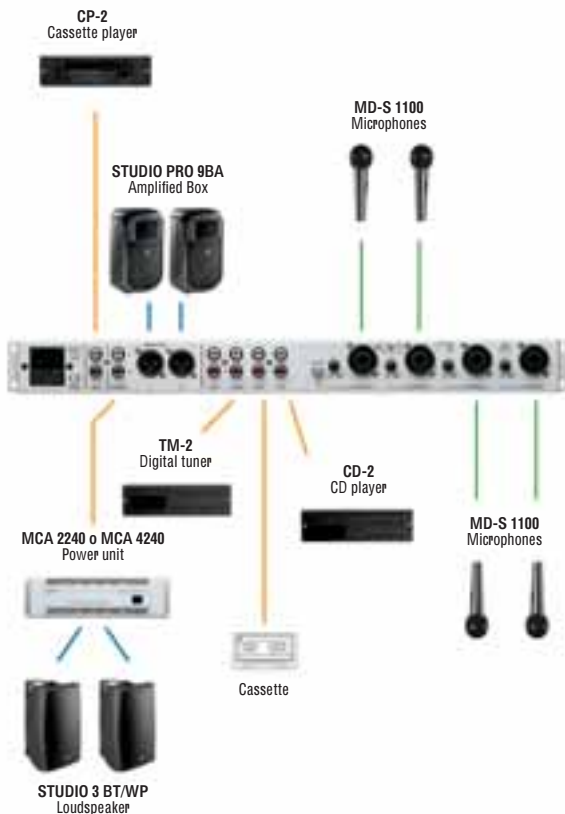
Preamplifier/mixer with 12 inputs and 4 outputs

- 4 micro/line inputs;
- Priority of the 4 microphone inputs over all other inputs and priority of the first input over the other 3
- Volume control and voice control for the 4 microphone inputs
- Phantom 24V. 4 stereo line inputs on double RCA with selection via purpose-provided selector knob

- General volume and tone control
- 2 XLR outputs for
- Left and right channel with independent volume control for each channel
- One stereo output and one stereo recording output
- 1 rack unit



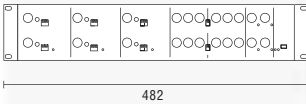
PREAMPLIFIER EQUIPMENT



M 12X4		
Code	18147	
Mono Channels micro	Impedance kohm	2,2
	Max input signal dBu	0
	Max gain (@ main Out)dB	65
	Equivalent input noise (EIN) (between 22Hz and 22KHz unweighted)	- 118
	CMRR (@main out, Gain 75dB)dB	- 65
Mono Channels line	Impedance kohm	33
	Max input signal dBu	30
	Max gain (@main Out) dB	25
Mono Channels tone	Voice dB	± 12
Stereo Channels tone	Impedance kohm	22
	Max input signal dBu	10
	Max gain (@ main Out) dB	10
Stereo Channels tone	High Shelving (@12kHz) dB	± 15
	Low Shelving (@80kHz) dB	± 15
General outputs	Impedance kohm	600
	Max output (main out) dBu	22
	Distortion + noise@16dBu (main out, 40dB gain)	0,025%
	Signal/noise ratio 20dB	96
	Frequency response (@0/1dB)	20Hz-20kHz
Power supply	100V±230V - 50Hz±60Hz with internal power supply unit	

MMZ 8004 S

4-ZONE PREAMPLIFIER



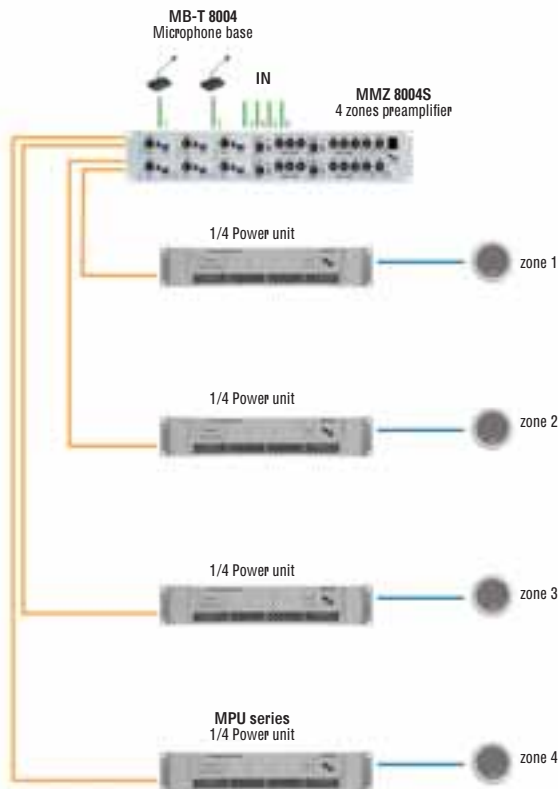
Preamplifier/mixer with 10 inputs and 4 outputs

- 6 Combo inputs
- 4 stereo line inputs for CD, Tape, Tuner and Aux, selected on each output zone
- 4 output buses with independent control
- Microswitch on each input for routing to each output
- Adjustable sensitivity of micro and line inputs
- Designed for connection to up to 2 amplified microphone bases from the MBT8000 series equipped with zone selector switches
- Designed for connection to emergency detection systems for guided evacuation, with priority over all inputs
- Automixer operating mode on

- 3 microphone channels, thanks to the GATING function (this function allows for the level of speech to be increased before the "Larsen effect" - feedback whistling - occurs)
- Internal switching power supply from 100V to 230V and from 50Hz to 60Hz
- 2 rack units



4 ZONE PAGING - LOCAL PRIORITY



	MMZ 8004 S
Code	19812
Features	Dimensions 2 racks with frame with RAL 7035 grey paint finish
Microphone-Max gain line	6 micro/line inputs with Combo connector (XLR and JACK) 75dB/2kohm
Input 1 and 2	Terminal board with option to select output 1,2,3 and 4 from a remote microphone
Max. gain line/Imp.	4 stereo inputs pin jack RCA 40dB/33kohm
Frequency response@0/-1dB	20Hz÷80KHz
S/N ratio@20db of gain	110dB
Level control	8 Volume controls, 6 GAIN controls, 2 Master Channels1:6 micro/line@80Hz-12dB/oct.
High pass filter	6 adjustment trimmers for voice presence on mic. inputs
Voice control	2 separate bass and treble tone controls on music inputs only
Phantom Power supply	48 VDC activated on micro inputs only
Output 1, 2, 3 and 4	Selectors enable routing of each input to output 1,2,3, 4
Inputs Music	4 stereo inputs on double RCA for CD, Tape, Tuner and Aux selected on each output zone
Outputs dB/Impedance	28 dBu/600 ohm balanced
Auxiliary outputs	Direct outputs channels 1-6 + recording socket output 1,2,3 and 4 0 dBu/600 ohm
Priority on music	Direct outputs channels 1-6 + recording socket output 1,2,3 and 4 0 dBu/600 ohm
Remote controls	Optional cards for: remote volume for outputs 1,2,3 and 4 - Automatic level control according to background noise on output 1
Emergency control	Input with photo coupler, Open Collector output
Insert bus 1 and 2	6.3mm stereo jack socket to connect auxiliary equipment
Luminous indicators	Led indicating saturation level (peak) on outputs 1,2,3, and 4 - phantom on (48 VDC micro)
Power supply VAC	230 VAC or 120 VAC with internal power supply unit
Optional accessories	MMZ-AR card for automatic level control according to background noise (output 1 only) MMZ-VRC card for remote volume control for pair of outputs 1/2

MZU 2008

ZONE PAGING UNIT

The MZU 2008 switching unit can be installed in 19" racks for selective voice/music switching in 8 audio zones, with the possibility to increase the number of zones as multiple of 8, adding other MZU 2008 in cascade.

Selection of the zones in which the music is to be interrupted and an announcement transmitted is carried out from the MBT 8008 control console.

Using the 8 "MUSIC" keys on the

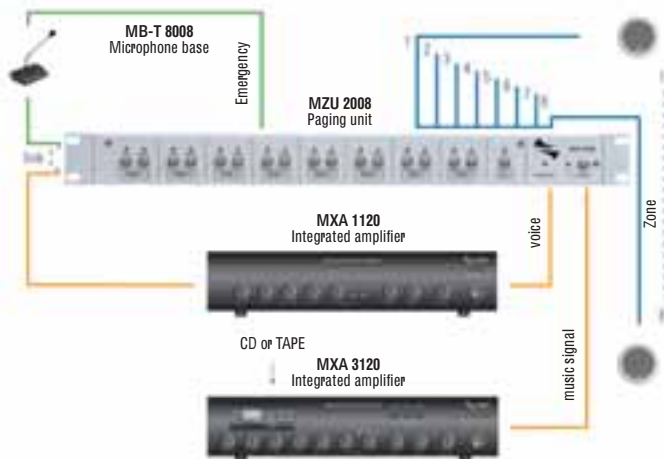
front panel, you can choose in which of the 8 audio zones to play the normal background music and in which zones no music is to be played. The system can be configured in one of the following ways:

- a) the 2 inputs of the unit are driven by two amplifiers, one of which is dedicated to voice transmission and the other to music transmission. The 8 outputs of the unit drive

the 8 speakers of the 8 audio zones.

- b) the 2 inputs of the unit are driven by two signal preamplifiers, one of which is dedicated to voice transmission and the other to music transmission.

The 8 outputs of the unit drive the 8 power amplifiers dedicated to sound diffusion in the 8 audio zones.

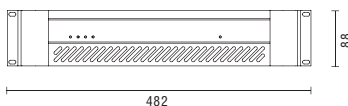


MZU 2008	
Code	12944
Characteristics	1 rack unit with frame with RAL 7035 light grey paint finish
Inputs	2 music inputs with two wires, speech with three wires, one of which is used for Emergencies (for amplifiers)
Outputs for loudsp. line (zones)	8 with three wires, one of which is used for Emergencies
Max. applicable power	1200 Watt/100 V, 840 Watt/70V, 600 Watt/50V, 300 Watt/25V
Controls	Speech key for each zone. Music key for each zone. General call key. Power ON-OFF key
Remote controls	Zone selection control. General call command. Activation of emergency and OPEN COLLECTOR output
Output power supply	Power supply +15/0/-15 VDC
Luminous indicators	Speech Led and Music Led per zone. General call indicator led. Emergency indicator led. Power ON-OFF indicator led
VAC Power supply	230 VAC with external power supply unit 120 VAC with external power supply unit
Optional accessories	MBT 8008 microphone base

MPU 2120

MPU 4060

MULTI CHANNEL 100V LINE POWER UNITS



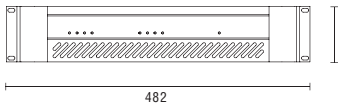
- Output with transformers for 100V and 70V lines
- Frequency response 40Hz to 20kHz
- 40Hz internal high-pass filter
- Configurations: 2x120W
- Thermal and short-circuit protections
- 2 U rack

Same features as the MPU 2120 model except for the following difference:

- Configurations: 4x60W, 2x120W



	MPU 2120	MPU 4060
Code	31080	31079
Features	2-channel monoblock amplifier	4-channel monoblock amplifier
Output power of all the driven channels	2x120Wrms 100V/70V	4x60Wrms 100V/70V 2x120Wrms 100V
Frequency response (@1 W, -3dB 100V output)	40Hz÷20kHz 40Hz internal high-pass filter	40Hz÷18kHz 40Hz internal high-pass filter
Signal/noise ratio	96dB (with filter 22Hz÷22kHz)	96dB (with filter 22Hz÷22kHz)
Separation between chan. THD+D@1W/8ohm	> 80dB	> 80dB
THD+D@1W/8ohm	0,005%	0,004%
Inputs	balanced with screw connector	balanced with screw connector
Input sensitivity	0dBu (0.775V) balanced 6dBu (1.5V) unbalanced	0dBu (0.775V) balanced 6dBu (1.5V) unbalanced
Input impedance	20kohm balanced 10kohm unbalanced	20kohm balanced 10kohm unbalanced
Controls	Volume control for each channel located in the back panel	Volume control for each channel located in the back panel
Light indicators	Input signal presence for each OC (over current) channel and Fault every two channels	Input signal presence for each OC (over current) channel and Fault every two channels
Power supply Vac	Internal setting 85÷132Vac 170÷264Vac (default)	Internal setting 85÷132Vac 170÷264Vac (default)
Absorption	300VA (@ max power with music signal)	250VA (@ max power with music signal)
Operating conditions	-20°C+40°C with max. humidity <90%	-20°C+40°C with max. humidity <90%
Protections	Short-circuit (OC), thermal (Fault)	Short-circuit (OC), thermal (Fault)
Cooling	1 ø 60mm fan	1 ø 60mm fan
Dimensions (WxHxD)	482x88x430mm (2 U rack)	482x88x430mm (2 U rack)



- Output with transformers for 100V and 70V lines
- Frequency response 40Hz to 20kHz
- 40Hz internal high-pass filter
- Configurations: 4x120W, 2x240W
- Thermal and short-circuit protections
- 2 U rack

Same features as the MPU 2120 model except for the following difference:

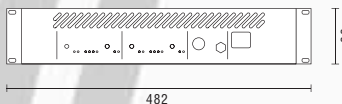
- Configurations: 4x240W, 2x480W



	MPU 4120	MPU 4240
Code	31059	31078
Features	4-channel monoblock amplifier	4-channel monoblock amplifier
Output power of all the driven channels	4x120Wrms 100V/70V 2x240Wrms 100V	4x240Wrms 100V/70V 2x480Wrms 100V
Frequency response (@1 W, -3dB uscita 100V)	40Hz÷20kHz 40Hz internal high-pass filter	40Hz÷18kHz 40Hz internal high-pass filter
Signal/noise ratio	96dB (with filter 22Hz÷22kHz)	96dB (with filter 22Hz÷22kHz)
Separation between channels	> 80dB	> 80dB
THD+D@1W/8ohm	0,005%	0,005%
Inputs	balanced with screw connector	balanced with screw connector
Input sensitivity	0dBu (0.775V) balanced 6dBu (1.5V) unbalanced	0dBu (0.775V) balanced 6dBu (1.5V) unbalanced
Input impedance	20kohm balanced 10kohm unbalanced	20kohm balanced 10kohm unbalanced
Controls	Volume control for each channel located in the back panel	Volume control for each channel located in the back panel
Light indicators	Input signal presence for each OC (over current) channel and Fault every two channels	Input signal presence for each OC (over current) channel and Fault every two channels
Power supply Vac	Internal setting 85÷132Vac 170÷264Vac (default)	Internal setting 85÷132Vac 170÷264Vac (default)
Absorption	600VA (@ max power with music signal)	1200VA (@ max power with music signal)
Operating conditions	-20°C+40°C with max. humidity <90%	-20°C+40°C with max. humidity <90%
Protections	Short-circuit (OC), thermal (Fault)	Short-circuit (OC), thermal (Fault)
Cooling	1 ø 60mm fan	2 ø 60mm fan
Dimensions (WxHxD)	482x88x430mm (2 U rack)	482x88x430mm (2 U rack)

MCA 4030

MULTI-CHANNEL CONSTANT VOLTAGE (100 V)



Monoblock power amplifier with 4 independent channels and 4 100V line transformers

- Configurations possible: 4x30W or 2x60W on 100V
- Level control on front panel
- Luminous indication of the operating mode

- Emergency control with an output open collector and an input for the alarm signal activation command
- Outputs with 3 wires for line, common and emergency



	MCA 4030
Code	20236
Characteristics	Monoblock amplifier with 4 channels
Continuous power with all	4x30W (100V) 2X60W (100V) piloted channels
Frequency response @1 W, -3dB	from 20Hz to 50 kHz
Harmonic distortion THD+N	< 0.05%
Signal/noise ratio	85dB (with filter 22Hz-22kHz)
Separation between channels	-66dB @100Hz, -75dB @ 1kHz, -70dB @ 10kHz
Inputs	A and B balanced, with screw connector (B priority)
Input impedance	10kOhm (unbalanced) 20kOhm (balanced)
Input sensitivity	0dBu (0.775V) with balanced input, 6dBu (1.5) with unbalanced input
Controls	Volume control for each channel
Indicators	Visual led indicators for each channel
Output connector type	"Faston" connectors
VAC power supply	100V±230V - 50Hz±60Hz with internal power supply unit
Absorption	300 W (@ max power with music signal)
Operating conditions	-20°C+40°C with max. humidity <90%
Protections	Thermal, short circuit, soft start
Dimensions	482x88x220mm (2 U rack)

CM

RACKS

Rack

depth 500mm, ready-to-assemble kit, made of sheet steel with RAL 7035 paint finish, comprising:

- Base (W=534xD=500mm) with four M10 threaded fittings
- Lid (W=534xD=500mm)
- Two side panels with 19" vertical pitch and ventilation slits
- Four swivel castors
- Assembly hardware set

Note: 1U = 44mm

MRK

RACK CABINET

Preassembled Rack cabinet

depth 600mm, made of sheet steel with RAL 7035 paint finish, comprising:

- Two side panels with 19" vertical pitch with ventilation slits
- Solid rear panel
- Reversible hinged door with glass window and lock
- Four swivel castors (optional)

Note: 1U = 44mm



Grey racks RAL7035

	CM 08	CM 12	CM 18	CM 22	CM 26
Code	12682	12681	12385	11827	12669
Description	8U	12U	18U	22U	26U
Dimensions WxD	500x530	500x530	500x530	500x530	500x530
Dimensions H	400	580	850	1030	1200
Weight	19	22,6	27,2	30	34,3

Plexiglas doors with lock

	AP 08	AP 12	AP 18	AP 22	AP 26
Code	12897	12898	12667	12178	12668
Description	8U	12U	18U	22U	26U

Rear perforated panels

	PP-A 02	PP-A 08	PP-A 12
Code	12899	12900	12901
Description	2U	8U	12U



Grey racks RAL7035

	MRK 12	MRK 20	MRK 24	MRK 30	MRK 36
Code	36546	35673	35839		
Description	12U	20U	24U	30U	36U
Dimensions WxD	600x600	600x600	600x600	600x600	600x600
Dimensions H	590	950	113	140	167

ACCESSORIES

S0

Pair of omega rack supports



Model	Code	Height	Weight	Cabinet
S0-12	12907	532mm	1,4 kg	AR12



S0-18	12908	800mm	2,1 kg	AR18
S0-22	12909	978mm	2,6 kg	AR22

SA 02

Rack upright



Model	Code
SA 02	12906

PA-A PC

Cabinet panels



Model	Code	Description	Colour
PA-A 01	12905	Perforated 1U	grey RAL7035
PC 01	12117	Solid 1U	grey RAL7035
PC 02	12116	Solid 2U	grey RAL7035
PC 03	12912	Solid 3U	grey RAL7035

RP 02

Universal internal shelf



Model	Code	Description	Colour
RP 02	12913	2U	grey RAL7035

DG 01

Cage nut



Model	Code	Pack
DG 01	12114	50 pcs

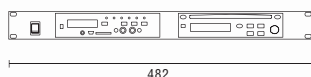
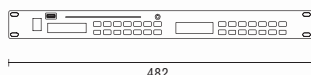
MUSIC SOURCES AND POWER SUPPLY PANEL

MPS1016

Power Supply Panel



Code 04693
(1 rack unit)



Remote control included
with MS02 CD3/T

Dual source

- 2 sections, each one featuring a stereo output with its own volume control
- One selector, shared by both sources, can mix stereo channels changing to MONO the CD and radio output for applications that do not need stereo sound
- It can be installed into a 19" rack 1U
- The CD player can play audio tracks and MP3 files from compact disc (CD, CD-R, CD-R/W) or USB drives ("Flash memory-stick with mp3 files)
- USB port on the front panel
- FM radio tuner (87.5-108 MHz) that can store up to 10 radio stations
- LCD display

Dual sound source system composed of:

USB & SD Card Reader and Recorder / Remote Control

- Recording through the Line-in is directly store to USB or SD Card
- Offers USB and SD Card function of each replication
- Recording format: MP3
- Playing format: MP3, WMA
- Accept the capacity of 128MB to 16G USB or SDHC Card
- With a language learning function, can be broadcast repeatedly at designated areas
- Adjustable recording quality, provide choice of, 128Kbps and 192Kbps

Anti Shock CD / USB & SD Card Reader / Remote Control

- Features
- Offers USB, SD Card and CD playing function of each replication
- Playing format: MP3, WMA
- Accept the capacity of 128MB to 16G USB or SD Card
- With a language learning function, can be broadcast repeatedly at designated area



MS02 CD3/T



MS02 CD/DG

	MS02 CD3/T
Code	27867
Tuner	AM/FM
Memories for the tuner (FM10 e AM10)	20
Mechanics	Antishock mechanics and electronics CD player that can play CD, CD-R, CD-R/W, MP3, USB MP3
Inputs/Outputs	Input: unbalanced 75ohm FM Antenna terminals - AM antenna loop terminals - USB port for memory stick - Output: audio RCA for AM/FM tuner - audio RCA for CD player
Power supply	220Vac
Power consumption	50VA
Weight	3.5 kg
Dimensions (WxHxD)	482x44x250mm

	MS02 CD3/DG
Code	27868
Mains power supply	230 VAC $\pm 10\%$ 50/60 Hz
DC External power supply	24 VDC
Mains consumption	45 VA
DC consumption	700 mA (max)
CD/USB/SD player output level	250 mV
USB/SD reader & recorder output level	900 mV
Weight	4,5 kg
Dimensions (WxHxD)	81 x 44 x 285

MPA 5120

120W POWER AMPLIFIERS

MPA 5240

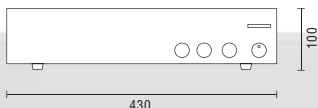
240W POWER AMPLIFIERS

MPA 5480

480W POWER AMPLIFIERS

EN 54 - 16

0068-CPD-005/2013



This is a new range of power units designed specifically for professional sound-broadcasting systems with service and emergency messages. Thanks to the great reliability of the protection circuits used, combined with an attractive appearance and the very tough structures, the MPA range constitutes the ideal product for quality amplification, with a particularly interesting price/ performance ratio. If this amplifier is used in emergency systems, it is possible to disable all the front-panel controls (tone and volume controls).

In this way it is possible to prevent the levels set at the time of commissioning the system from being altered accidentally.

Balanced line input/output (XLR-F and XLR-M sockets, with adjustable sensitivity).

- Unbalanced line input (double RCA socket)
- MBT 1101 microphone station input (RJ45 socket)
- Telephone/emergency audio input for priority calls with adjustable threshold and sensitivity
- Front panel overall volume

control and treble and bass controls

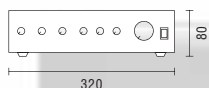
- Rear-panel selector switch for enabling/disabling front-panel tone and volume controls
- Constant voltage (50/70/100 V) or 8 Ω impedance loudspeaker line output.
- LED-type Vu meter for clear and immediate monitoring of output power
- Contacts for activating precedence on line input
- Alerting signal (chime) with level control
- Selectable 230/115 VAC and 24 VDC mains power supply



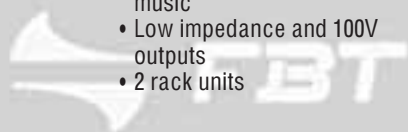
	MPA 5120	MPA 5240	MPA 5480
Code	37490	37489	37491
Rated output power	120 W	240 W	480 W
Constant voltage output / low impedance output	100-70-50 V / 8 Ω	100-70-50 V / 8 Ω	100-70-50 V / 8 Ω
Tones control	Bass ± 10 dB (100 Hz) ; Treble ± 10 dB (10 kHz)	Bass ± 10 dB (100 Hz) ; Treble ± 10 dB (10 kHz)	Bass ± 10 dB (100 Hz) ; Treble ± 10 dB (10 kHz)
In UNITS	RJ45 (MBT 1101)	RJ45 (MBT 1101)	RJ45 (MBT 1101)
Sensitivity / Impedance	1250 mV	320 mV	320 mV
S/N Ratio	> 78 dB	> 78 dB	> 78 dB
Frequency response	30 $\div$ 20.000 Hz	30 $\div$ 20.000 Hz	30 $\div$ 20.000 Hz
Number of consoles MBT 1101	Max 6 consoles in daisy chain max distance 200 mt	Max 6 consoles in daisy chain max distance 200 mt	Max 6 consoles in daisy chain max distance 200 mt
Line input	balanced XLR, unbalanced RCA	balanced XLR, unbalanced RCA	balanced XLR, unbalanced RCA
Sensitivity / Impedance	300 mV / 60 k Ω	300 mV / 60 k Ω	300 mV / 60 k Ω
S/N Ratio	>77 dB	>77 dB	>77 dB
Frequency response	30 $\div$ 20.000 Hz	30 $\div$ 20.000 Hz	30 $\div$ 20.000 Hz
Telephone input	balanced with priority activation	balanced with priority activation	balanced with priority activation
Sensitivity / Impedance	120 mV / 6 k Ω	120 mV / 6 k Ω	120 mV / 6 k Ω
S/N Ratio	>75 dB	>75 dB	>75 dB
Frequency response	230 $\div$ 13.000 Hz	230 $\div$ 13.000 Hz	230 $\div$ 13.000 Hz
Line OUT	balanced, XLR	balanced, XLR	balanced, XLR
Power supply	230/115 Vca - 50/60 Hz / 24 Vcc	230/115 Vca - 50/60 Hz / 24 Vcc	230/115 Vca - 50/60 Hz / 24 Vcc
Mains power supply	280 W (320 VA)	535 W (610 VA)	1160 W (1330 VA)
External DC power supply	6,6 A / 0,2 A	13,2 A / 0,2 A	33 A / 0,8 A
Rack dimensions 19"	Optional bracket RMK 5000	Optional bracket RMK 5000	Optional bracket RMK 5000
Dimensions (L x H x P)	432 x 88 x 272 mm	432 x 88 x 272 mm	432 x 88 x 360 mm
Weight	8,2 kg	10,5 kg	16 kg

AM 5030

INTEGRATED AMPLIFIERS



- 30W Integrated amplifier
- 2 microphone sockets
- Priority of microphone over music
- Low impedance and 100V outputs
- 2 rack units



P.A. AMPLIFIER - AM

MIC 1

MIC 2

PHONO



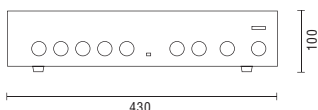
	AM 5030
Code	11583
Features	100W desktop amplifier
Rated/Maximum power	30/40W
Frequency response	50÷18kHz
Distortion (Rated P. 1kHz)	<3%
Inputs/Sensitivity -Impedance	Linea 100mV
Output impedance	4-8-16ohm
Output voltage	100V
Tone controls	150Hz/1kHz-6kHz
VAC power supplies	220Vac
Weight	4,7 Kg
Dimensions (WxHxD)	320x80x190mm



MXA 1060

MXA 1120

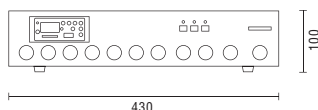
INTEGRATED AMPLIFIERS



- 2 microphone inputs with phantom power supply (XLR). MIC 1 with automatic precedence function (VOX) and threshold adjustment control
- Microphone input (XLR) with phantom power supply or RJ45 for connecting up to 6 MBT 1101 microphone stations (maximum distance 200 m)
- MIC/PH/LINE input with associated selector switch 2 auxiliary inputs
- for sound sources (TAPE/CD)
- Telephone/emergency audio input for priority calls with adjustable threshold and sensitivity
- Front-panel level control for each microphone and auxiliary input
- Front panel overall volume control and treble and bass controls
- Constant voltage (50/70/100 V) or 8 Ω impedance loudspeaker line output
- Auxiliary line output
- LED-type Vu meter for immediate monitoring of output power
- Microswitches for setting priorities and input functions
- Inclusion/exclusion of speech filter on all microphone inputs
- Contacts for activating input precedence
- Alerting signal (chime) with level control
- Selectable 230/115 VAC and 24 VDC mains power supply



	MXA 1060	MXA 1120
Code	37638	37639
Rated power output	60 W	120 W
Constant voltage output / low impedance output	100-70-50 V e 8 Ω	100-70-50 V e 8 Ω
Tones control	Bass ± 10 dB (100 Hz) ; Treble ± 10 dB (10 kHz)	Bass ± 10 dB (100 Hz) ; Treble ± 10 dB (10 kHz)
MIC.1 and MIC.2 input	2 balanced, XLR (phantom power 17,5 V) MIC1 with priority activation	2 balanced, XLR (phantom power 17,5 V) MIC1 with priority activation
Sensitivity / Impedance	0,9 mV / 900 Ω	0,9 mV / 900 Ω
S/N Ratio	>62 dB	>62 dB
MIC3 / UNITS input	balanced, XLR (phantom power) RJ45 (MBT 1101)	balanced, XLR (phantom power) RJ45 (MBT 1101)
Sensitivity / Impedance	MIC.: 0,9mV / 900 Ω - UNITS: 290 mV / 700 k Ω	MIC.: 0,9mV / 900 Ω - UNITS: 290 mV / 700 k Ω
S/N Ratio	MIC.: >62 dB – UNITS: >65 dB	MIC.: >62 dB – UNITS: >65 dB
Number of consoles MBT 1101	Max 6 consoles in daisy chain max distance 200 mt	Max 6 consoles in daisy chain max distance 200 mt
MIC / LINE 4 input	balanced, XLR with Phantom selector/Mic/Line	balanced, XLR with Phantom selector/Mic/Line
Sensitivity / Impedance (MIC / LINE 4)	MIC: 0,9 mV / 900 Ω - LINE: 90 mV / 50 k Ω	MIC: 0,9 mV / 900 Ω - LINE: 90 mV / 50 k Ω
S/N Ratio MIC / LINE 4	MIC: >62 dB – LINE: >70 dB	MIC: >62 dB – LINE: >70 dB
Auxiliary input	2 unbalanced, RCA (CD, TAPE)	2 unbalanced, RCA (CD, TAPE)
Sensitivity / Impedance	150 mV / 6 k Ω	150 mV / 6 k Ω
S/N Ratio	>70 dB	>70 dB
Telephon input	balanced with priority activation	balanced with priority activation
Sensitivity / Impedance	150 mV / 6 k Ω	150 mV / 6 k Ω
S/N Ratio	> 72 dB	> 72 dB
LINE OUT	900mV / 100 Ω unbalanced, RCA	900mV / 100 Ω unbalanced, RCA
Power supply	230/115 Vca - 50/60 Hz / 24 Vcc	230/115 Vca - 50/60 Hz / 24 Vcc
Max power consumption	130 W (150 VA)	270 W (320 VA)
Max power at 24 Vcc	3,4 A / 0,1 A	6,7 A / 0,2 A
Rack dimensions 19"	Optional bracket RMK 5000	Optional bracket RMK 5000
Dimensions (L x H x P)	430 x 88 x 234 mm	430 x 88 x 234 mm
Weight	6,5 kg	9 kg

**USB 3000 USB/SD card Module**

Code 37642

- 2 balanced/unbalanced microphone inputs with phantom power supply
- Microphone input or microphone stations of the MBT 1000 range
- 2 MIC/PH/LINE inputs with specific selector switch
- 2 auxiliary inputs for sound sources (TAPE/CD)
- Telephone/emergency audio input for priority calls with adjustable threshold and sensitivity
- Front-panel adjustment of the level of each microphone and auxiliary input
- Front-panel control of overall volume and of treble and bass tones
- Provisions for inserting via the front panel a USB/SD CARD module ()
- Constant voltage (50/70/100 V) or 8 Ω impedance loudspeaker line output
- 3 output lines for zones
- Balanced line output for connection to other amplifiers
- Output/input for connection to audio processors
- LED-type Vu meter for clear and immediate reading of power emitted
- Microswitches for setting operating modes
- Includable/excludable speech filters on all microphone inputs
- Contacts for activating input precedence and override
- "Music On Hold" output with output level control (output of the selected auxiliary signal)
- Alerting signal (chime) with level control
- Front-panel keys for selecting music listening zones
- Selectable mains power supply - 230/115 VAC or 24 VDC



	MXA 3120	MXA 3240
Code	37640	37641
Rated power output	60 W	120 W
Constant voltage output / low impedance output	100-70-50 V e 8 Ω	100-70-50 V e 8 Ω
Tones control	Bass ± 10 dB (100 Hz) ; Treble ± 10 dB (10 kHz)	Bass ± 10 dB (100 Hz) ; Treble ± 10 dB (10 kHz)
MIC.1 e MIC.2 input	2 balanced, XLR (phantom power 17,5 V) MIC1 with priority activation	2 balanced, XLR (phantom power 17,5 V) MIC1 with priority activation
Sensitivity / Impedance	0,9 mV / 900 Ω	0,9 mV / 900 Ω
S/N Ratio	>62 dB	>62 dB
MIC3 / UNITS input	balanced, XLR (phantom power) Rj45 (MBT 1101)	balanced, XLR (phantom power) Rj45 (MBT 1101)
Sensitivity / Impedance	MIC.: 0,9mV / 900 Ω - UNITS: 290 mV / 700 k Ω	MIC.: 0,9mV / 900 Ω - UNITS: 290 mV / 700 k Ω
S/N Ratio	MIC.: >62 dB – UNITS: >65 dB	MIC.: >62 dB – UNITS: >65 dB
Number of consoles MBT 1101	Max 6 consoles in daisy chain max distance 200 mt	Max 6 consoles in daisy chain max distance 200 mt
MIC / LINE 4 input	balanced, XLR with Phantom selector/Mic/Line	balanced, XLR with Phantom selector/Mic/Line
Sensitivity / Impedance	MIC: 0,9 mV / 900 Ω - LINE: 90 mV / 50 k Ω	MIC: 0,9 mV / 900 Ω - LINE: 90 mV / 50 k Ω
S/N Ratio	MIC: >62 dB – LINE: >70 dB	MIC: >62 dB – LINE: >70 dB
Auxiliary inputs	2 unbalanced, RCA (CD, TAPE)	2 unbalanced, RCA (CD, TAPE)
Sensitivity / Impedance	150 mV / 6 k Ω	150 mV / 6 k Ω
S/N Ratio	>70 dB	>70 dB
Telephone output	balanced with terminal for priority activation	balanced with terminal for priority activation
Sensitivity / Impedance	150 mV / 6 k Ω	150 mV / 6 k Ω
S/N Ratio	> 72 dB	> 72 dB
LINE OUT	900mV / 100 Ω , unbalanced RCA	900mV / 100 Ω , unbalanced RCA
Power supply	230/115 Vca - 50/60 Hz / 24 Vcc	230/115 Vca - 50/60 Hz / 24 Vcc
Max power consumption	130 W (150 VA)	270 W (320 VA)
Max power at 24 Vcc	3,4 A / 0,1 A	6,7 A / 0,2 A
Rack dimensions 19"	Optional bracket	Optional bracket
Dimensions (L x H x P)	430 x 88 x 234 mm	430 x 88 x 234 mm
Weight	6,5 kg	9 kg

MDS 1060

MDS 1120

MDS 1240

MUSIC DISTRIBUTION SYSTEM

The MDS 1000 compact systems combine a reliable amplifier, an MP3 player, an SD/MMC card drive, a USB socket for connection to external storage units and a digital FM tuner in a single piece of equipment that also features a range of functions typical of sound-broadcasting systems. The XLR sockets on the rear panel can be separately configured as microphone inputs (with or without phantom power supply) or as line inputs. The operating mode

can be selected by means of the specific three-position switches above the sockets. Each of these inputs has its own level control so as to be able to adjust the amplitude of the various different signals suitably. In addition, the MIC/LINE 1 microphone input has an automatic precedence function (VOX): when speaking with the microphone connected to this input, all the music and microphone inputs will be automatically muted.

It is possible to connect all dynamic microphones and the MBT 6400S microphone bases to the MDS 1000 Compact Systems.

- MP3 file player via USB, SD or MMC card
- FM digital tuner
- n°3 MIC./LINE inputs with operating mode selector switches.
- n°1 VOX input (MIC/LINE 1)
- n°1 auxiliary input for sound sources (TAPE/CD)

- XLR sockets for connection to dynamic microphones and/or MBT 6400S microphone bases
- Terminal strip for loudspeakers output (25-70-100V/4ohm)
- Terminal strip for external 24 Vdc power supply
- Terminal strip for microphone precedence
- Possibility to connect an external equalizer and/or booster.
- Selectable mains power (230/120Vac)



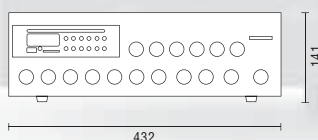
	MDS 1060		MDS 1120		MDS 1240	
Code	37495		37496		37497	
RMS output power (THD <1%)	60 W		120 W		240 W	
Constant voltage outputs	100, 70, 25 V		100, 70, 25 V		100, 70, 25 V	
Low impedance outputs	4 ohm		-		-	
Tones control						
Bass tones @100 Hz	± 12 dB		± 12 dB		± 12 dB	
Treble tones @10 kHz	± 11 dB		± 11 dB		± 11 dB	
Microphone/line inputs	MIC	LINE	MIC	LINE	LINE	LINE
Sensitivity/impedance	3 mV/1,5 k	250mV/100kohm	3 mV/1,5 kohm	250mV/100kohm	250mV/100kohm	250mV/100kohm
S/N Ratio	68 dB	72 dB	70 dB	76 dB	76 dB	76 dB
S/N Ratio ('A' weighted)	73 dBA	80 dBA	73 dBA	82 dBA	82 dBA	82 dBA
MIC/LINE 1 VOX activation threshold	0,9 mV	-	0,9 mV	-	-	-
Frequency response	35÷16.000 Hz		35÷16.000 Hz		35÷16.000 Hz	
Phantom supply	18 V / 2,2 kohm	-	18 V / 2,2 kohm	-	18 V / 2,2 kohm	-
Auxiliary input						
Sensitivity/impedance	400 mV/22 kohm		400 mV/22 kohm		400 mV/22 kohm	
S/N Ratio	78 dB		80 dB		80 dB	
S/N Ratio ('A' weighted)	85 dBA		82 dBA		85 dBA	
Frequency response	30÷18.000 Hz		30÷18.000 Hz		30÷18.000 Hz	
VOX and precedence attenuation	-60 dB		-60 dB		-60 dB	
PWR IN input						
Sensitivity/impedance	1 V / 22 kohm		1 V / 22 kohm		1 V / 22 kohm	
S/N Ratio	85 dB		93 dB		93 dB	
S/N Ratio ('A' weighted)	100 dBA		100 dBA		100 dBA	
Frequency response	30÷18.000 Hz		30÷18.000 Hz		30÷18.000 Hz	
LINE OUT output						
Output level/impedance	1 V / 200 ohm		1 V / 200		1 V / 200	
PRE OUT output						
Output level	1 V		1 V		1 V	
Consumption						
230/120V Mains power supply ±10% 50/60 Hz	P = 150 W		P = 300 W		P = 600 W	
External 24Vdc power supply	4 A		10 A		20 A	
Dimensions	430x88x270 mm		430x88x270 mm		430x88x270 mm	
Weight	6,3 kg		8,3 kg		10,5 kg	

- 2 balanced/unbalanced microphone inputs with phantom power supplies
- Microphone input or microphone bases of the MBT 1000 range
- 2 MIC/PH/LINE inputs with associated selector switch
- 2 auxiliary inputs for sound sources (TAPE/CD)
- Telephone/emergency audio input for priority calls with adjustable threshold and sensitivity

- Front-panel level controls for each microphone and auxiliary input
- Front panel overall volume control and treble and bass controls
- Multi-purpose sound source module with CD-MP3/ USB/SD CARD player and AM/FM tuner.
- Constant voltage (50/70/100 V) or 8 Ω impedance loudspeaker output lines
- 6 output lines (zones) with front-panel level control for the music

- signal for each single zone
- Balanced line output for connection to other amplifiers
- Output/input for connection to audio processors
- Connection to an external amplifier for simultaneous music and speech in different zones
- LED-type Vu meter for clear and immediate monitoring of output power
- Microswitches for setting the

- operating modes
- Inclusion/exclusion of speech filter on all microphone inputs
- Contacts for activating input precedence and override
- "Music On Hold" output with output level control (output of selected auxiliary signal)
- Alerting signal (chime) with level control
- Selectable 230/115 VAC and 24 VDC mains power supply



	MDS 6120	MDS 6240
Code	37643	37644
Rated power output	120 W	240 W
Constant voltage outputs / Low impedance outputs	100-70-50 V e 8 Ω	100-70-50 V e 8 Ω
Tones control	Bass $\pm$ 10 dB (100 Hz) ; Treble $\pm$ 10 dB (10 kHz)	Bass $\pm$ 10 dB (100 Hz) ; Treble $\pm$ 10 dB (10 kHz)
Microphone inputs MIC.1 and MIC.2	2 balanced, XLR (phantom power 17,5 V) MIC1 with priority activation	2 balanced, XLR (phantom power 17,5 V) MIC1 with priority activation
Sensitivity / impedance	1,2 mV / 1300 Ω	1,2 mV / 1300 Ω
S/N Ratio	> 66 dB	> 66 dB
Microphone input MIC.3/UNITS	balanced, XLR (phantom power 17,5 V) / 1 Rj45 (MDS 1106)	balanced, XLR (phantom power 17,5 V) / 1 Rj45 (MDS 106)
Sensitivity / impedance	MIC: 1,2 mV / 1,3 k Ω ; UNITS: 850mV / 800 k Ω	MIC: 1,2 mV / 1,3 k Ω ; UNITS: 850mV / 800 k Ω
S/N Ratio	MIC: >66 dB ; UNITS: >76 dB	MIC: >66 dB ; UNITS: >76 dB
Number of consoles MBT 1101	Max 8 consoles in daisy chain max distance 1 km	Max 8 consoles in daisy chain max distance 1 km
Microphone inputs MIC./LINE 4 and 5	2 balanced XLR Phantom selector/Mic/Line	2 balanced XLR Phantom selector/Mic/Line
Sensitivity / impedance	MIC: 1,2 mV / 1,3 k Ω ; LINE: 110 mV / 130 k Ω	MIC: 1,2 mV / 1,3 k Ω ; LINE: 110 mV / 130 k Ω
S/N Ratio	MIC: >66 dB ; LINE: >77 dB	MIC: >66 dB ; LINE: >77 dB
Auxiliary inputs	2 RCA (CD + TAPE)	2 RCA (CD + TAPE)
Sensitivity / impedance	CD: 450 mV / 35 k Ω ; TAPE: 220 mV / 18 k Ω	CD: 450 mV / 35 k Ω ; TAPE: 220 mV / 18 k Ω
S/N Ratio	> 80 dB	> 80 dB
Telephone input	balanced with terminals for priority activation	balanced with terminals for priority activation
Sensitivity / impedance	105 mV / 6 k Ω	105 mV / 6 k Ω
S/N Ratio	> 74 dB	> 74 dB
Frequency response	200 $\div$ 20.000 Hz	200 $\div$ 20.000 Hz
Signal outputs	5	5
LINE OUT	XLR balanced, 1 V / 3,9 k Ω	XLR balanced, 1 V / 3,9 k Ω
PRE OUT	RCA, 0,8 V / 3,8 k Ω	RCA, 0,8 V / 3,8 k Ω
APE OUT	2 RCA, 0,9 V / 2 k Ω	2 RCA, 0,9 V / 2 k Ω
Music On Hold (MOH) Pre-amplified line	terminal strip (HOT-COM), 2 V / 300 Ω	terminal strip (HOT-COM), 2 V / 300 Ω
Music On Hold (MOH) Amplified line	terminal strip (GND-MON), 1,9 W / 8 Ω	terminal strip (GND-MON), 1,9 W / 8 Ω
Power supply	230/115 VCA - 50/60 Hz / 24 Vcc	230/115 VCA - 50/60 Hz / 24 Vcc
Max power consumption	280 W (325 VA)	510 W (590 VA)
Rack dimensions 19"	6,8 A / 0,2 A	13,1 A / 0,3 A
Dimensions (L x H x P)	432 x 133 x 360 mm	432 x 133 x 360 mm
Weight	14 kg	16,5 kg



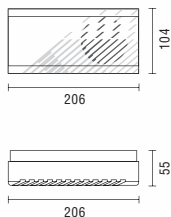


CEILING LOUDSPEAKERS SOUND PROJECTORS

*Sound Design Project
for Fuzen Sushi Restaurant - Grand Hotel Oasis
(Bulgaria)*

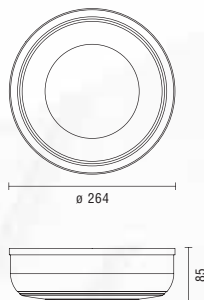
SAFE 10 PT

ABS SURFACE MOUNTING WALL LOUDSPEAKER



DNH surface mounting self-extinguishing polycarbonate wall loudspeaker

- Power 6 Watt
- 100V transformer
- SPL 1W/1m 85dB
- Dispersion (-6dB) 1kHz/4kHz 140°/100°
- Grey RAL7035 colour



WCS 650

CEILING/WALL SPEAKER

ABS ceiling/wall sound speaker

- 10Watt dual cone loudspeaker with 153 g ferrite magnet
- 70V/100V line transformer and loudspeaker with 6,5" cone
- Easy mounting with the supports included

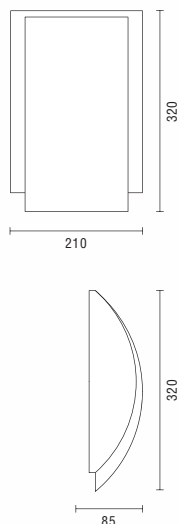


	SAFE 10 PT
Code	09356
Features	IP56 weatherproof and V0 self-extinguishing, with transformer
Mounting system	Screw terminals
Rated/Maximum power	10/15W RMS
Colour	Grey
Frequency response	150÷20.000Hz
Sensitivity 1W/1m	85dB
Maximum SPL 1m	95dB
Weight	0,8 Kg
Dimensions (WxHxD)	206x55x104mm

	WCS 650
Code	29470
Features	ABS
Colour	White
Frequency response	80÷18kHz
Sensitivity 1W/1m	93dB
Rated/Maximum power	5W / 10W RMS
Transformer	100V
DC impedance	7,2ohm
Weight	1 Kg
Dimensions	ø 264x85mm

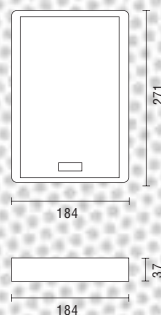
WSH 1006

CEILING/WALL SPEAKER



Sound speaker with painted metal protective grille

- 6 Watt dual cone loudspeaker with 153 g ferrite magnet
- Mounted horizontally or vertically
- 70V/100V line transformer and loudspeaker with 5.5" cone
- Easy mounting thanks to the hole cover plugs provided



FPS/505T

ABS SURFACE MOUNTING WALL LOUDSPEAKERS

PVC flush mounting wall loudspeaker

- 2-way
- Rated power 20W at 4 Ohm
- Dispersion (-6dB) 1kHz/4kHz 150°/70°
- Power 6 Watt with 100V transformer
- Woofer 5" 1/4 with dome tweeter
- SPL @1W/1m 87dB
- White colour



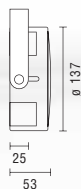
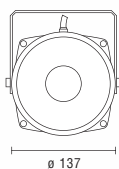
	WSH 1006
Code	29419
Features	ABS
Colour	White
Frequency response	100÷15kHz
SPL	98dB at 100V 6W
Sensitivity 1W/1m	91dB
Rated/Maximum power	3W / 6W RMS
Transformer	100V
DC impedance	6,8ohm
Weight	1,4 Kg
Dimensions (WxHxD)	210x320x85mm

	FPS/505T
Code	35302
Features	Loudspeaker with transformer
Mounting system	Screw fit
Rated/Maximum power (100V)	6/8 Watt RMS
Colour	Grey
Frequency response	160÷14.000Hz
Sensitivity 1W/1m	87dB
Maximum SPL 1m	96dB
Input voltage	100V
Weight	1,1 Kg
Dimensions (WxHxD)	184x271x37mm



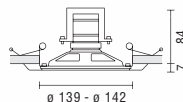
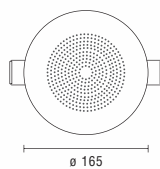
AQUA 30

LOUDSPEAKER FOR UNDERWATER AND CLEAN ROOM APPLICATIONS



DNH ABS wall or surface mounted loudspeaker for underwater or clean room applications

- IP68 grade of protection
- Rated power 20W at 8 Ohm
- Max/min operating temperature 90 C°/-30°C
- Dispersion (-6dB) 1kHz/4kHz 180°/180°
- SPL 1W/1m 105dB
- White colour
- Guarantees superb audio quality for the reproduction of music and speech in underwater environments, positioned at a max of 2 metres below the water's surface



DNH aluminium ceiling loudspeaker with paint finish

- Specifically designed for use in sterile environments
- Loudspeaker fitted with special protections to ensure that no dust or airborne particles are generated or affect operation
- Rated power 6W
- Sensitivity 1W/1m 88dB
- Dispersion (-6dB) 1kHz/4kHz 170°/60°
- Grey RAL9010 colour

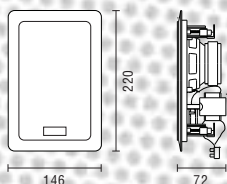


	AQUA 30
Code	10436
Features	IP68 watertight
Mounting system	Recessed or on bracket included
Rated/Maximum power	20/30 Watt
Colour	Blue NCS 1070B
Frequency response	80÷20.000 Hz
Sensitivity 1W/1m	105dB
Maximum SPL 1m	118dB
Weight	2,5 Kg
Dimensions	ø 137x53mm

	BK 560 CRT
Code	09309
Features	Developed for clean rooms
Mounting system	Spring-clips
Rated/Maximum power	6 Watt
Colour	White RAL 9010
Frequency response	70÷15.000 Hz
Sensitivity 1W/1m	88dB
Maximum SPL 1m	95dB
Weight	1,1 Kg
Dimensions	ø 165x84mm

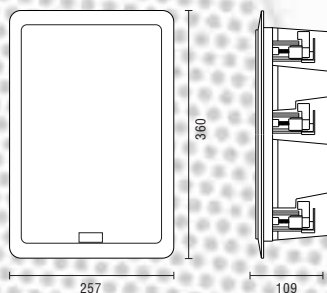
IW-100 T

ABS SURFACE MOUNTING CEILING LOUDSPEAKER



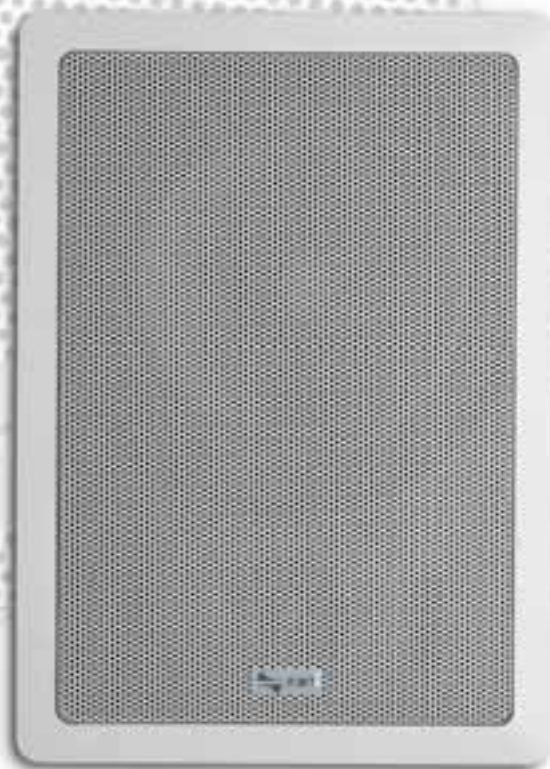
ABS surface mounting ceiling loudspeaker

- 2-way with 4" woofer and 1" dome tweeter
- Rated power 1/2/4/7.5/15W RMS with 100V transformer
- Frequency response 60-20,000Hz, sensitivity @1W/1m of 88dB
- Dispersion (-6dB) 1kHz/4kHz 80°/150°



ABS surface mounting ceiling loudspeaker

- 2-way with 8" woofer and 1" dome tweeter
- Rated power 1/2/4/7.5/15/30W RMS
- 100V transformer
- Frequency response 40-20,000Hz, sensitivity @1W/1m of 90dB
- ABS base
- Dispersion (-6dB) 1kHz/4kHz 80°/140°



	IW-100 T
Code	17859
Rated/Maximum power	1/2/4/7.5/15W RMS
Loudspeaker	2-way coaxial, 4" woofer with 1" dome tweeter
Frequency response	60±20.000Hz
Sensitivity 1W/1m	88dB
Maximum SPL 1m	99dB
Input voltage	100V-70V
Weight	1,3 Kg
Dimensions (WxHxD)	146x220x72mm
Cut-out diameter	195x120mm
Accessories	surface mounting recess RB100

RB-100

Surface mounting recess

Code 18159
Surface mounting recess for IW-100T loudspeakers

	IW-200 TCP
Code	17862
Rated/Maximum power	2/4/7.5/15/30W RMS with transformer
Loudspeaker	100V with regulator 2-way coaxial, 8" woofer with 1" dome tweeter
Frequency response	40±20.000Hz
Sensitivity 1W/1m	90dB
Maximum SPL 1m	105dB
Input voltage	100V-70V
Weight	3 Kg
Dimensions (WxHxD)	257x360x109mm
Cut-out diameter	225x330mm
Accessories	surface mounting recess RB200

RB-200

Surface mounting recess

Code 18160
Surface mounting recess for IW-200T loudspeakers

MCSL 006 TW

BUILT-IN SPEAKERS

MCSL 006 TWP

CSL 106/T

BUILT-IN SPEAKERS

CSL 520 TIC

ABS in-ceiling speaker with metal protection grille

- Colour white RAL9016
- Full range 2,5" dual cone

ABS watertight (IP55) in-ceiling speaker with metal protection grille

- ABS back cover equipped with cable sleeve to ensure good sealing
- Colour white RAL9016
- Full range 4" dual cone

Built-in speaker with painted metal grille

- Colour white RAL9016
- Dual cone loudspeaker with 5" woofer

ABS in-ceiling speaker with metal protection grille

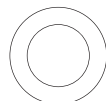
- Metal back cover
- Colour white RAL9016,
- Coaxial loudspeaker with 5" woofer and 1/2" tweeter
- 88dB+/- 3dB sensitivity @1W/1m
- Nominal Power 2,5/5/10/20W/8ohm with 100V/70V line transformer
- Building-in hole 200mm



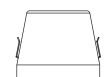
103



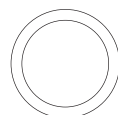
95



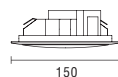
140



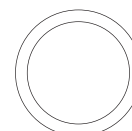
120



150



150



203



170



	MCSL 006/TW	MCSL 006/TWP
Code	29425	29426
Features	In-ceiling speaker ABS body and metal protection grille	
Rated/Maximum power	1.5/3/6W	1.5/3/6W
Frequency response	120:20.000Hz	150:18.000Hz
Sensitivity 1W/1m	87dB	91dB
Maximum SPL 1m	91dB	95dB
Input voltage	100V	100V
Cut-out diameter	95mm	125mm
Weight	0,5 Kg	0,9 Kg
Dimensions	ø 103x80mm	ø 140x130mm

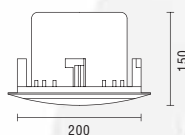
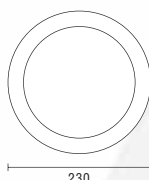
	CSL 106/T	CSL 520 TIC
Code	29427	29416
Rated/Maximum power	3/6W	2.5/5/10/20W/8ohm
Frequency response	100:20.000Hz	100:20.000Hz
Sensitivity 1W/1m	93dB	88dB
Input voltage	100V	100V
Cut-out diameter	150mm	170mm
Weight	0,5 Kg	1,8 Kg
Dimensions	ø 150x60mm	ø 203x145mm

CSL 630 TIC

BUILT-IN SPEAKERS

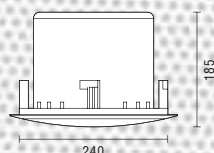
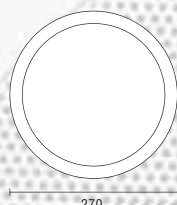
ABS in-ceiling speaker with metal protection grille

- Metal back cover
- Colour white RAL9016,
- Coaxial loudspeaker with 6" woofer and 1/2" tweeter
- Nominal Power 3.8/7.5/15/30W/80hm with 100V/70V line transformer
- 90-20,000Hz frequency response
- 88dB+/- 3dB sensitivity @1W/1m
- Diameter 230x150mm
- Building-in hole 200mm



ABS in-ceiling speaker with metal protection grille

- Colour white RAL9016
- Full range 2.5" dual cone,
- Nominal Power 1.5/3/6W with 100V/70V line transformer
- 120-20,000Hz frequency response
- 87dB+/- 3dB sensitivity @1W/1m
- Diameter 270x185mm
- Building-in hole 240mm



	CSL 630 TIC	CSL 840 TIC
Code	29417	29418
Rated/Maximum power	3.8/7.5/15/30W/80hm	5/10/20/40W/80hm
Frequency response	90:20.000Hz	50:20.000Hz
Sensitivity 1W/1m	88dB	88dB
Input voltage	100V	100V
Cut-out diameter	200mm	240mm
Weight	2,3 Kg	3,1 Kg
Dimensions	ø 230x150mm	ø 270x185mm

CSL 606 TWP

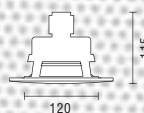
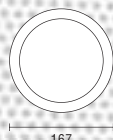
BUILT-IN SPEAKERS

ABS watertight (IP55) in-ceiling speaker

- Plastic printed cone, plastic basket and white RAL 9016 grille
- 5" loudspeaker with coaxial 1" tweeter, water-resistant and

resistant to the corrosion due to outdoor mounting

- 70/100V integrated transformer
- Low impedance socket (8ohm)
- Maximum power 45W



	CSL 606 TWP
Code	29429
Rated/Maximum power	25W/80hm
Frequency response	95:20.000Hz
Sensitivity 1W/1m	90dB
Input voltage	100V
Cut-out diameter	122mm
Weight	0,7 Kg
Dimensions	ø 167x115mm

DP 10 T

PLASTIC DNH SOUND PROJECTORS

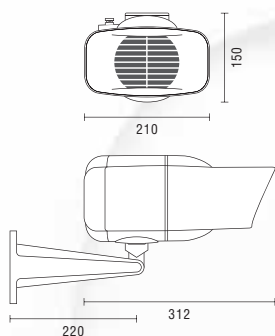
DPD 10 T

CAR 6 FT

DNH FIRE RESISTANT SOUND PROJECTORS

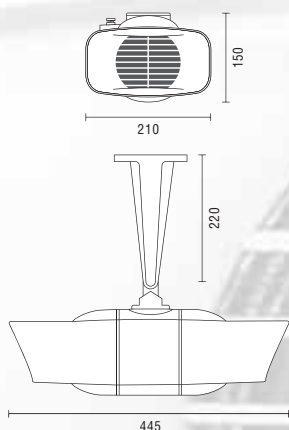
DNH IP 55 rated sound projector

- Made in anticorrosion polyamide
- Wall or ceiling mounted articulated support
- 10 Watt power
- 100V line transformer
- Maximum/minimum operating temperature 150 C°/-40°C
- SPL 1W/1m 96dB
- Dispersion (-6dB) 1kHz/4kHz 110°/40°



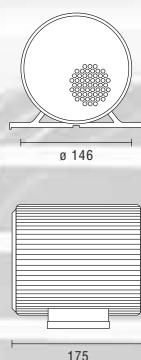
DNH IP 55 rated sound projector

- Made in anticorrosion polyamide
- Articulated support
- Wall or ceiling mounted
- 10 Watt power
- 100 V line transformer
- Maximum/minimum operating temperature 150 C°/-40°C
- SPL 1W/1m 94dB
- Dispersion (-6dB) 1kHz/4kHz 110°/40° bidirectional



DNH bi-directional loudspeaker

- Anodised aluminium or white
- NEMKO certified fire resistant at 150°C for 24 hours, at 750° for 30 minutes
- Power 6 Watt
- 100V transformer
- Max/min operating temperature 150 C°/-40°C
- SPL 1W/1m 92dB
- Dispersion (-6dB) 1kHz/4kHz 150°/150°



	DP 10 T	DPD 10 T
Code	09352	11818
Features	Watertight IP55	Watertight IP56 Bidirectional
Mounting system	Bracket	Bracket
Rated/Maximum power	10/15 Watt	10/15 Watt
Colour	Light grey RAL 7035	Light grey RAL 7035
Frequency response	150÷15.000 Hz	150÷15.000 Hz
Angular dispersion	110°/40°	110°/40° bidirectional
Sensitivity 1W/1m	96dB	94dB
Maximum SPL 1m	105dB	103dB
Input voltage	100 Volt	100 Volt
Operating temperature	da -40°C a 150°C	da -40°C a 150°C
Weight	2,7 Kg	3,7 Kg
Accessories of the kit	Bracket	Bracket
Dimensions (WxHxD)	210x150x312mm	210x150x445mm

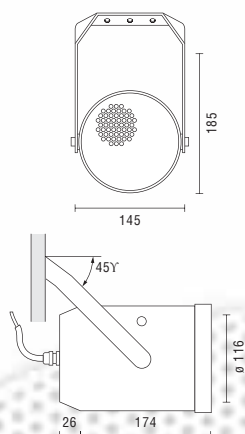
	CAR 6 FT
Code	11956
Features	Bi-directional fire-resistant with transformer
Mounting system	Bracket
Rated/Maximum power	6/8 Watt
Colour	Aluminium/anodised
Frequency response	150÷15.000Hz
Sensitivity 1W/1m	92dB
Maximum SPL 1m	99dB
Input voltage	100 Volt
Operating temperature	da -40°C a 150°C
Weight	2,2Kg
Dimensions	ø145x175mm

CAD 20 T

ABS SOUND PROJECTORS

ABS Sound projector watertight

- In-built UV protection IP55
- Aluminium U bracket
- Dual cone polypropylene speaker
- Power 20 Watt
- 100V transformer
- Max/min operating temperature 85 C°/-20°C
- SPL 1W/1m 92dB
- Dispersion (-10dB) 1kHz/4kHz 180°/70°

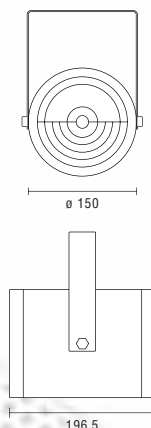


SP 115 WP

ABS SOUND PROJECTORS

IP44 Weatherproof ABS sound projector

- Power 1.5/3/6W
- 50/70/100V transformer
- Complete with steel bracket
- 5.5" plastic loudspeaker
- Frequency response 150-20kHz
- Max/min operating temperature 85 C°/-20°C
- SPL@1W/1m 94dB
- Dispersion (-10dB) 1kHz/4kHz 150°/50°



	CAD 20 T
Code	11469
Features	Dual cone loudspeaker with transformer
Mounting system	Stainless steel U bracket
Rated/Maximum power	20 Watt
Colour	White
Frequency response	110÷18.000 Hz
Sensitivity 1W/1m	92dB
Maximum SPL 1m	105dB
Input voltage	100/70 Volt
Operating temperature	da -20°C a 85°C
Weight	1,9 Kg
Dimensions	ø 138x200mm

	SP 115 WP	SP 115 B/WP
Code	37636	37637
Features	IP44 Weatherproof sound projector	Bi-directional IP44 Weatherproof sound projector
Mounting system	Stainless steel U bracket	Stainless steel U bracket
Rated/Maximum/Power	6 Watt, 3 Watt, 1,5 Watt	6 Watt, 3 Watt, 1,5 Watt
Colour	White	White
Frequency response	150-20 kHz	150-20 kHz
Sensitivity 1W/1m	94dB	94dB
Maximum SPL 1m	101dB	101dB
Input voltage	100/70/50 Volt	100/70/50 Volt
Operating temperature	da 85°C a -20°C	da 85°C a -20°C
Weight	2,2 Kg	2,2 Kg
Dimensions	ø 150x196,5mm	ø 150x196,5mm

CESL 10T**CESL 20T****CESL 10T BIDI**

ALUMINIUM SOUND PROJECTORS

Watertight (IP55) sound projector

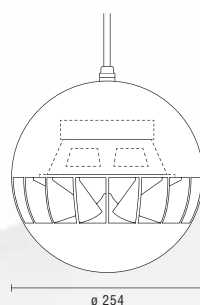
- White RAL9016 painted aluminium
- Polypropylene dual cone loudspeaker
- 10/5/2.5/1.25 Watt power
- 100V Transformer
- Maximum/minimum operating temperature 85 C°/-20 C°
- SPL 1W/1m 91dB
- Dispersion (-10dB) 1kHz/8kHz 150°/50°

Watertight (IP55) sound projector

- White RAL9016 painted aluminium
- Polypropylene dual cone loudspeaker
- 20/10/5Watt power
- 100V Transformer
- Maximum/minimum operating temperature 85 C°/-20 C°
- SPL 1W/1m 92dB
- Dispersion (-10dB) 1kHz/8kHz 150°/50°

Watertight (IP55) sound projector

- White RAL9016 painted aluminium
- Polypropylene dual cone loudspeaker
- 10/5/2.5 Watt power
- 100V Transformer
- Maximum/minimum operating temperature 85 C°/-20 C°
- SPL 97dB@100V 5W
- Dispersion (-6dB) 1kHz/160° 110°/40° for each direction

**GB 820/T**

SPHERICAL SPEAKER

ABS IP55-rated spherical speaker to be mounted on the ceiling, ideal for large area coverage

- Coaxial 8" speaker playing both voice and music, extremely clear voice play
- 360° horizontal and 140° vertical dispersion
- 20 Watt power
- 100V Transformer
- Equipped with 5 m cable

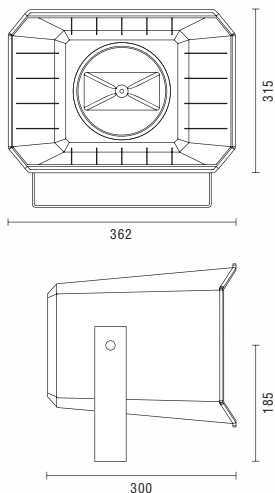


	CESL 10T	CESL 20T	CESL 10T BIDI
Code	29420	29421	29429
Rated/Maximum power	10/5/2.5/1.25W	20/10/5W	10/5/2.5W
Frequency response	130Hz:15.000Hz	110Hz:15.000Hz	130Hz:15.000Hz
Sensitivity 1W/1m	91dB	92dB	91dB
Input voltage	100V	100V	100V
Weight	2,2 Kg	2,8 Kg	2,8 Kg
Dimensions	ø 138x205mm	ø 170x252mm	ø 138x205mm

	GB 820/T
Code	29430
Rated/Maximum power	20W/10W/5W
Frequency response	160Hz:12.500Hz
Sensitivity 1W/1m	93dB
Maximum SPL 1m	106dB
Input voltage	100V
Weight	2,2Kg
Dimensions	ø 254mm

MHS 50T

MUSIC HORN



ABS and polypropylene watertight (IP66) two-way DNH music horn

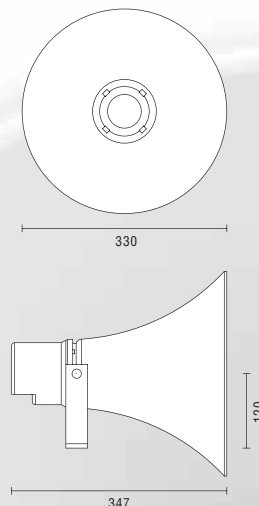
- Wide frequency-response and wide dispersion angle
- Stainless steel adjustable bracket, ABS light grey body treated to be resistant to sunlight
- Sealed with silicone gasket
- 50Watt power with 100V transformer



	MHS 50T
Code	29431
Rated/Maximum power	50W
Colour	Light Grey RAL 7035
Frequency response	90-20.000Hz
Sensitivity 1W/1m	99dB
Weight	3,9 Kg
Dimensions (WxHxD)	362x315x300mm

HS 50T

HORN



ABS watertight (IP66) two-way music horn

- 100V line transformer and driver
- High-pass filter for driver protection, suitable for internal and external environments with temperature between -25°C e +70°C
- Colour white RAL7035
- Stainless steel bracket
- Double insulation



	HS 50T
Code	29422
Rated/Maximum power	50W
Colour	Light Gray RAL 7035
Frequency response	380-6.500Hz
Sensitivity 1W/1m	109dB
Maximum SPL 1m	126dB
Input voltage	100Volt
Operating temperature	from 85°C to -20°C
Weight	2,3 Kg
Dimensions	ø 330x347mm

PH 10 T

ABS HORN LOUDSPEAKERS

PH 20 T

PH 30 T

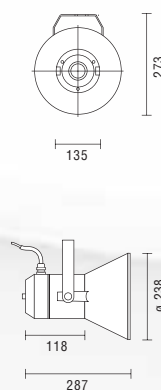
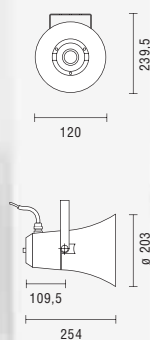
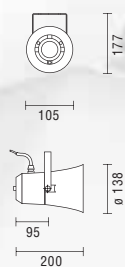
ABS HORN LOUDSPEAKERS

IP 66 weatherproof circular horn loudspeaker in ABS

- RAL 7035 light grey colour
- Stainless steel U bracket
- Power 10/5/2,5/1,25 Watt
- 100V transformer
- Max/min operating temperature 85 C°/-20°C
- SPL 1W/1m 106dB
- Dispersion (-10dB) 1kHz/4kHz 180°/70°

IP 66 weatherproof circular horn loudspeaker in ABS

- RAL 7035 light grey colour
- Stainless steel U bracket
- Power 10/5/2,5/2.5 Watt
- 100V transformer
- Max/min operating temperature 85 C°/-20°C
- SPL 1W/1m 108dB
- Dispersion (-10dB) 1kHz/4kHz 180°/60°



	PH 10 T	PH 20 T
Code	11474	11475
Features	Plastic, weatherproof and UV protection with transformer	Plastic, weatherproof and UV protection with transformer
Mounting system	U Bracket	U Bracket
Rated/Maximum power	10 Watt	20 Watt
Colour	Light Grey RAL 7035	Light Grey RAL 7035
Frequency response	400÷8.000 KHz	350÷8.000 KHz
Sensitivity 1W/1m	106dB	108dB
Maximum SPL 1m	116dB	121dB
Input voltage	100/70 Volt	100/70 Volt
Operating temperature	da -20°C a 85°C	da -20°C a 85°C
Weight	1,3 Kg	1,9 Kg
Dimensions	ø 138x200mm	ø 203x254mm

	PH 30 T
Code	10446
Features	Plastic, weatherproof and UV protection with transformer
Mounting system	U Bracket
Rated/Maximum power	30 Watt
Colour	Light Grey RAL 7035
Frequency response	330÷8.000 KHz
Sensitivity 1W/1m	110dB
Maximum SPL 1m	124dB
Input voltage	100/70 Volt
Operating temperature	da -20°C a 85°C
Weight	2,1 Kg
Dimensions	ø 238x287mm



EN 54 - 24

**LOUDSPEAKER CABINETS
SOUND COLUMN SPEAKERS
OUTDOOR SPEAKERS**

*Sound Design Project
for Pasaron Stadium
Pontevedra - Spagna*

VERTUS DLA 1244A

DIGITAL CONTROL ACTIVE LINE ARRAY

VERTUS DLA 804A

VERTUS CLA

PASSIVE COLUMN LINE ARRAY

- Perfect for the reproduction of high-quality speech/vocal application in reverberant environments, it can be used also for sound reinforcement as well as for fixed installations
- Possibility of stacking on a subwoofer from the MITUS range through the optional mounting accessory and of wall-mount installation with the supplied bars
- Standard white finish RAL 9016
- 16 x 50W RMS - 126dB SPL
- 2-way active column line array with digital beam steering technology
- 12 x 100mm (4") full-range custom speakers with 25mm (1") voice coil
- 4 x 25mm (1") dome neodymium tweeter on waveguides
- Frequency response from 100Hz to 20kHz
- 16 x 50W RMS power amplifiers in Class D with switching mode power supply for a total of 800 W RMS
- the 2 way system design allows a high-quality full-range reproduction of the musical signal



- 8 x 50W RMS - 123dB SPL
- Active column line array with digital beam steering technology
- 8 x 100mm (4") full-range custom speakers with 25mm (1") voice coil
- Frequency response from 120Hz to 10kHz
- 8 x 50W RMS power amplifiers in Class D with switching mode power supply for a total power of 400 W RMS



- 500W 8ohm 123dB SPL
- 2-way passive column line array
- 6 x 100mm (4") custom woofer with 25mm (1") voice coil
- 4 x 25mm (1") dome neodymium tweeter on a waveguide
- Frequency response from 130Hz to 20kHz
- 100V transformer with 2 levels of power, 100 and 200W
- 100°H x 20°V dispersion
- 4-pole Euroblock input connector: 8ohm - 100W/100V - 200W/100V
- Extruded-aluminum powder-coated cabinets
- Wall-mount installation bars are supplied
- Expandable line array by adding CLA604 modules in order to increase SPL and reduce the vertical radiation lobe width
- Ideal for fixed installation in reverberant environments, it can improve both music and voice intelligibility by improving direct/reflected sound quality

	DLA 1244A	DLA 804A
Code	36187	36186
Configuration	16 way	8 way
Built-in amplifier cont. rms LF/HF	16 x 40 W	8 x 40 W
Built-in amplifier max. rms LF/HF	16 x 50 W	8 x 50 W
Built-in amplifier max. peak LF/HF	16 x 100 W	8 x 100 W
Frequency response	100Hz - 20KHz @-6dB	120Hz - 20KHz @-6dB
Low frequency woofer	12 x 4 - 1 coil	8 x 4 - 1 coil
High frequency driver	4 x 1 - 1 coil - neodymium	-
Maximum SPL cont/peak	123 / 126 dB	120 / 123 dB
Dispersion HxV	100° x Digital Controlled	100° x Digital Controlled
Steering Angle	+30 / -30V	+30 / -30V
Beamwidth Angle	10 / 40V	10 / 40V
Input impedance	22 kOhm	22 kOhm
Crossover frequency	3 kHz	3 kHz
AC Power requirements	650 VA	400 VA
Input connectors	Euroblock with loop and SUB OUT	Euroblock with loop and SUB OUT
Power cord	5 / 16.4 mm/inch	5 / 16.4 mm/inch
Net dimensions (WxHxD)	130x1685x131 mm 5.11x66.33x5.15 inch	130x965x131 mm 5.11x38x5.15 inch
Net weight	5 / 16.4 kg/lb	22 / 48.5 kg/lb
Transport dimensions(WxHxD)	220x1760x220 mm 8.66x69.29x8.66 inch	220x1040x220 mm 8.66x40.94x8.66 inch
Transport weight	13 / 28.6 kg/lb	25 / 55 kg/lb

	CLA 604
Code	36145
Configuration	2 way
Recommended amplifier	500 W rms
Long term power	250 W
Short term power IEC 268-5	1000 W
Transformer	100 / 200 V/W
Nominal impedance	8 Ohm
Frequency response	100Hz - 20KHz @-6dB
Low frequency woofer	6 x 4 - 1 coil
High frequency driver	4 x 1 - 1 coil - neodymium
Sensitivity (@1W/1m)	93 dB
Maximum SPL cont/peak (Bi-Amp)	120 / 123 dB
Dispersion HxV	100° x 20°
Crossover frequency	3 kHz
Recommended HP filter	80hz - 24dboct
Input connectors	4 x Euroblock
Net dimensions (WxHxD)	130x841x130 mm 5.12x33.1x5.12 inch
Net weight	8/17,6 kg/lb
Transport dimensions(WxHxD)	170x900x170 mm 6.7x35.4x6.7 inch
Transport weight	10/22 kg/lb

Aluminium alloy housing and hot galvanised steel front grille. Due to its very sturdy and waterproof construction it is specially designed for industrial halls, warehouses, as well as open spaces exposed to outdoor weather conditions. Equipped with broadband loudspeaker to ensure excellent sound reproduction, adjustable sliding mounting bracket and a line transformer 100/70/50 V to set power output 20- 10-5 W. The MSP 420 TW/EN loudspeakers include a thermal fuse which excludes the speaker in case of overheating and a flame resistant connecting cable (80 cm long).



Thanks to use of excellent wide band loudspeakers, the **SOP 412 T/EN** and **SOP 426 TB/EN** units prove to be suitable for both music and speech applications. The loudspeakers are enclosed in white cylindrical casings made of V0 self-extinguishing ABS (UL94-V0) and equipped with adjustable swivelling bracket for easy installation, wall or ceiling.

Designed to achieve directional characteristic of sound emission they are mostly applied on circulation routes, corridors and in the wide areas. Each models include a line transformer, a thermal fuse which excludes the speaker in case of overheating and a flame resistant connecting cable (80 cm long).



	MSP 420 TW/EN
Code	37734
Rated power	20 W
Adjustable power	20 / 10 / 5 W
Material	Aluminium, galvanised steel front grill
Loudspeakers	1 broadband
Sound press. SPL Pnom/1m	103 dB
Sensitivity 1W/1m	90 dB
Frequency response	150 ÷ 15.000 Hz
Dispersion angle @2kHz	90°
Protection degree	IP 65
Installation	Adjustable brackets and fire resistant cable included
Colour	silver, black grill
Dimensions (W x H x D)	180 x 145 x 178 mm
Weight	2,4 kg

	SOP 412 T/EN	SOP 426 TB/EN
Code	37733	37732
Rated power	12 W	12 W + 6 W
Adjustable power	12 / 6 / 3 W	12 / 6 / 3 W
Material	ABS UL94-V0	ABS UL94-V0
Loudspeakers	1 broadband	2 broadband
Sound press. SPL Pnom/1m	99 dB	96 dB
Sensitivity 1W/1m	89 dB	89 dB
Frequency response	180 ÷ 15.000 Hz	170 ÷ 12.000 Hz
Dispersion angle @2kHz	160°	140°
Protection degree	IP 44	IP 44
Installation	Adjustable swivelling bracket and fire resistant cable included	Adjustable swivelling bracket and fire resistant cable included
Colour	white	white
Dimensions (W x H x D)	Ø 140 x 207 mm	Ø 140 x 207 mm
Weight	1,4 kg	1,85 kg

WMS 406 T/EN

WALL-MOUNTING SPEAKERS

WMS 406 T/EN loudspeakers have been designed as surface or ceilingmounted units for a wide area of applications. Thanks to their steel casings the loudspeakers are tough to vandals and more resistant to any and all mechanical damages. They are equipped with ceramic terminal block and thermal fuse that ensure continuous operations of sound transmitting line connected with the loudspeaker even in the case the latter is damaged or burnt as a result of fire.



	WMS 406 T/EN
Code	37730
Rated power	6 W
Adjustable power	6 / 3 / 1,5 W
Material	metal
Loudspeakers	1 broadband
Sound press. SPL Pnom/1m	98 dB
Sensitivity 1W/1m	91 dB
Frequency response	120 ÷ 15.000 Hz
Dispersion angle @2kHz	130°
Installation	Wall and ceiling with screw
Color	white
Dimensions (W x H x D)	210 x 190 x 70 mm
Weight	1,6 kg

WSP 406 T/EN

WALL-MOUNTING SPEAKERS

The WSP 406 T/EN speakers, with elegant and discrete design, are specifically aimed at schools, hospitals, waiting rooms, hotels, where both music and speech have to be heard by customers. Can be mounted in any position on a wall or ceiling. Self-extinguishing ABS (UL94-V0) body with metal front grille. Ceramic bloc



	WSP 406 T/EN
Code	37729
Rated power	6 W
Adjustable power	6 / 3 / 1,5 W
Material	ABS UL94-V0, metal grille
Loudspeakers	1 broadband
Sound press. SPL Pnom/1m	96 dB
Sensitivity 1W/1m	89 dB
Frequency response	150 ÷ 10.000 Hz
Dispersion angle @2kHz	150°
Installation	Wall and ceiling with screw
Color	white
Dimensions (W x H x D)	258 x 169 x 72 mm
Weight	0,8 kg

The **CSP 406 T/EN** and **CSP 412 T/EN** speaker units, suitable for mounting in false ceilings, ensure excellent reproduction of both speech and music. Made of stamped metal sheeting treated with white scratchproof and non-reflecting paint, they will fit elegantly into any environment. Each unit consists of a load-bearing ring with quick-fitting hooks with springs for easy securing to the ceiling. The central mask with the loudspeaker cabled

to the line transformer fits into the ring with a handy turning movement. According to the specification of the EN 54-24 voice evacuation system, this range of speakers has a double-galvanized steel flameproof cap, combined with ceramic input/output terminal strips, a thermal fuse and a ground termination. The built-in transformer enables connection to constant-voltage lines at 100, 70 and 50V with the adjustable outputs.



	CSP 406 T/EN	CSP 412 T/EN
Code	37727	37728
Rated power	6 W	12 W
Adjustable power	6 / 3 / 1,5 W	12 / 6 / 3 W
Material	metal	metal
Loudspeakers	1 dual cone broadband	1 dual cone broadband
Sound press. SPL Pnom/1m	99 dB	105 dB
Sensitivity 1W/1m	92 dB	95 dB
Frequency response	100 ÷ 15.000 Hz	80 ÷ 20.000 Hz
Dispersion angle @2kHz	150°	130°
Mounting	spring fixing system	spring fixing system
Installation hole	Ø 160 ÷ 165 mm	Ø 200 ÷ 205 mm
Colour	white	white
Dimensions (W x H x D)	Ø 180 x 120 mm	Ø 220 x 140 mm
Weight	1,5 kg	1,7 kg

The ideal applications for **RWS 412 T/EN** speaker units are in hospitals, hotels, offices, schools, shops and whenever flush-mounting with a discreet and elegant aesthetic impact is required. Made of self-extinguishing plastic material to UL94-V0 with a front metal grille, they are available with a line transformer. Ceramic block and temperature limit fuse are installed inside the loudspeaker. A metal box for flush mounting enables easy and rapid wall or ceiling mounting.



	RWS 412 T/EN
Code	37731
Rated power	12 W
Adjustable power	12 / 6 / 3 W
Material	ABS UL94-V0, metal grille
Loudspeakers	1 broadband
Sound press. SPL Pnom/1m	99 dB
Sensitivity 1W/1m	89 dB
Frequency response	150 ÷ 15.000 Hz
Dispersion angle @2kHz	120°
Installation hole	Box for flush mounting wall/ceiling
Colour	white
Dimensions (W x H x D)	165 x 280 x 90 mm
Weight	2 kg

The **MHO 420 TW/EN** horn type speaker units are particularly well suited for outdoor use, even in difficult weather conditions. They feature a watertight construction and a high level of weatherproofing. The body is made of die-cast aluminium while the screws and brackets are made of stainless steel. The horn is made of

aluminium sheeting. Each model has a line transformer and a rear switch for selecting the operating output (5 steps).

The **MHO 420 TW/EN** has been designed to be used in security installations and has a thermal fuse which excludes the speaker in case of overheating, a ground connector and a flame resistant connecting cable (80 cm long).



	MHO 420 TW/EN
Code	37735
Rated power	20 W
Adjustable power	20 / 15 / 10 / 5 / 2.5 W
Material	Aluminium
Loudspeakers	Complete with driver unit
Sound press. SPL Pnom/1m	123 dB
Sensitivity 1W/1m	110 dB
Frequency response	160 ÷ 10.000 Hz
Dispersion angle @2kHz	80°
Protection degree	IP 65
Installation	Adjustable brackets and fire resistant cable included
Colour	Light grey
Dimensions (W x H x D)	Ø 213x230 mm
Weight	1,8 kg

The new series of STYLE sound speakers combines high quality sound play with innovative design, creating a new concept and a catching look that are able to satisfy several architectural needs.

The sound speaker shall no more be hidden, with the risk of affecting the sound quality. Instead, it will be integrated in the environment, combining form and function, acoustics and integration in the environment.

The nature itself has inspired this loudspeaker: in the nature the sound spreads to all directions, and, hence, we have developed a speaker that could reproduce a natural sound feeling. The sound diffusion in the nature is 360°, whereas in standard speakers its propagation is conic-shaped and, hence, has a narrow angle. Thanks to the conic-shape of the diaphragm, STYLE sound speakers provide a 360° sound diffusion, reaching even the highest frequencies. The sound diffusion spreads to all directions, keeping the sound natural and accurate even when the volume is very high.

Thanks to this new technology you will immediately forget the geometric diffusion you are used to and you will be able to recreate a holographic and three-dimensional sound effect in any environment.

Moreover, thanks to the material Style speakers are made of and to the aluminium loudspeaker, they are suitable for outdoor mounting and resist to various weather conditions.

- 360° even sound diffusion
- Even sound diffusion over a wide frequency range (120 Hz ÷ 20KHz) to all directions
- They can be powered using standard amplifiers
- The listening position is not bound by the orientation towards the axis

- Perfect both for high-fidelity systems and for sound diffusion in environments such as train stations, airports, restaurants, shopping centres etc.
- Full end even sound energy pressure everywhere in the environment
- High sound efficiency

- Excellent results with reference to the Larsen effect thanks to the sound energy that is reduced to one fourth towards the microphone
- Low intermodulation
- Low second harmonic distortion
- Classic modern design, perfect for any environment



STYLE A40

STYLE P80

STYLE S80



Customization is possible upon request

TR-20 Switching unit



Cod. 31011

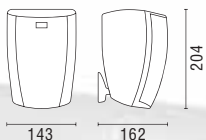
	STYLE A40	STYLE P80	STYLE S80
Code	31150	31151	31152
Type	Ceiling mounted	Suspending mounted	Wall hanging speaker
System	One way system	One way system	One way system
Enclosure	Plastic flange (Duroplast)	Plastic flange (Duroplast)	Plastic material (PC+ABS+Duroplast Fenol)
Colour	White RAL 9010 matte	White RAL 9010 matte	White RAL 9010 matte
Driver equipment	1x FDS 100/40 ALU Sonus/NewTec	1 x FDS 100/40 ALU Sonus/NewTec	1x FDS 100/40 ALU Sonus/NewTec
Nom. Imp. / DC Widerstand	8Ω / 6,2Ω	8Ω / 6,2Ω	8Ω / 6,2Ω
Nominal / Music Power	40 Watt RMS / 90 Watt Music power	80 Watt / 165 Watt	80 Watt / 165 Watt
Sensitivity (1W@1m 2,83V@1m)	86,4dB (+6dB auf 360°)	86,4dB (+6dB auf 360°)	86,4dB (+6dB auf 360°)
Maximum SPL	104dB (active high pass 120Hz/18dB - Oktave)	104dB (active high pass 120 Hz / 18dB - Oktave)	104dB (active high pass 120 Hz / 18dB - Oktave)
Frequency response	105 - 20.000 Hz (+/-3dB)	105 - 20.000 Hz (+/-3dB)	100 - 20.000 Hz (+/-3dB)
Connectors	Press-Terminal	Press-Terminal	Screw-terminal
Net weight (only the loudspeaker)	470gr	830gr	1160gr
Gross weight (inc. Package)	720gr	1170gr	1530gr
Dimensions	ø 180x15mm installation depth 35mm	ø 134x135mm + cab. stand. lenght 1mt - Deckendose (Baldachin) Höhe 72mm, ø60	ø 134x130x220mm
Accessories	TR-20 Code 31011 Deckendose (Baldachin) Höhe 100Volt / 2000Ω - 250Ω	TR-20 Code 31011 transformer 5 pole print-terminal 100Volt / 2000Ω - 250Ω	TR-20 Code 31011 transformer 5 pole print-terminal 100Volt / 2000Ω - 250Ω
Nominal Power 100V	2,5-5-10-20 Watt	2,5-5-10-20 Watt	2,5-5-10-20 Watt
Maximum SPL 100V	101,5dB	101,5dB	101,5dB

PROJECT

PROJECT 315

PROJECT 320

LOUDSPEAKER CABINETS



Grey RAL 7035 or black RAL 9005

ABS loudspeaker

- Bracket included
- 2 way bass reflex
- 3.5" woofer and 0.5" tweeter
- 100V line transformer (Multi Tapp)
- Frequency response @-10dB is 100Hz-15kHz
- Dispersion HxV 120°x120°
- High-pass filter recommended 70Hz-24dB/oct
- 8-piece multiple packing
- 15W/30W nominal/maximum power
- Setting 2/4/7.5/15W/8ohm
- Sensitivity 85dB
- Max SPL 100dB

Grey RAL 7035 or black RAL 9005

ABS loudspeaker

It has the same characteristics as the 315 version, with the following features:

- 20W/40W nominal/maximum power
- Setting 4/8/15/20W/8ohm
- Sensitivity 87dB
- Max SPL 103Db



Project 315 WHT
Project 320 WHT

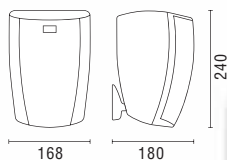


Project 315 BT
Project 320 BT



Wall bracket manufactured from die-cast aluminium with ball/socket multi angle adjustment capability and steel security cable.

	Project 315 BT / WHT	Project 320 BT / WHT
Code	29350 / 32372	29221 / 32367
Configuration	2 way	2 way
Recommended amplifier	30W rms	40W rms
Long term power	15W	20W
Short term power	60W	80W
Line transformer (100V)	1-2-4-7,5-15W	4-8-15-20W
Nominal impedance	8ohm	8ohm
Frequency response @-10dB	100Hz-15kHz	100Hz-20kHz
Low frequency woofer	88mm	88mm
Tweeter	13mm	13mm
Sensitivity (@1W,1m)	85dB	87dB
Max. Spl	100dB	103dB
Dispersion	120x120 HxV	120x120 HxV
Recommended hp filter	70Hz-24dB/oct	70Hz-24dB/oct
Input connector	Euroblock	Euroblock
Dimensions (WxHxD)	143x204x162mm	143x204x162mm

**Grey RAL 7035 or black RAL 9005****ABS loudspeaker**

- Bracket included
- Grey or black ABS loudspeaker
- 2 way bass reflex
- 5" woofer and 0.75" tweeter
- 100V line transformer(Multi Tapp)
- Frequency response @-10dB 85Hz-20kHz
- Dispersion HxV 100°x100°
- High-pass filter recommended 55Hz-24dB/oct
- 30W/60W nominal/maximum power
- Setting 10/15/20/30W/8ohm
- Sensitivity 87.5dB
- Max SPL 106dB

Grey RAL 7035 or black RAL 9005**ABS loudspeaker**

It has the same characteristics as the 530 version, with the following differing features:

- 50W/100W nominal/maximum power
- Setting: 15/25/40/50W/8ohm
- Sensitivity 89dB
- Max SPL 109dB



Project 530 WHT
Project 530 WHT



Project 550 BT
Project 550 BT



Wall bracket manufactured from die-cast aluminium with ball/socket multi angle adjustment capability and steel security cable.

	Project 530 BT / WHT	Project 550 BT / WHT
Code	29223 / 32368	29225 / 32369
Configuration	2 way	2 way
Recommended amplifier	60W rms	100W rms
Long term power	30W	50W
Short term power	120W	200W
Line transformer (100V)	10-15-20-30W	15-25-40-50W
Nominal impedance	8ohm	8ohm
Frequency response @-10dB	85Hz-20kHz	80Hz-20kHz
Low frequency woofer	130mm	130mm
Tweeter	20mm	25mm
Sensitivity (@1W,1m)	87,5dB	89dB
Max. Spl	106dB	109dB
Dispersion	100x100 HxV	100x100 HxV
Recommended hp filter	55Hz-24dB/oct	50Hz-24dB/oct
Input connector	Euroblock	Euroblock
Dimensions (WxHxD)	168x240x180mm	168x240x180mm

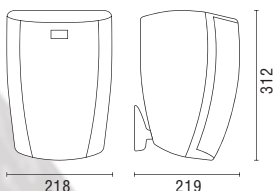


PROJECT

PROJECT 640

LOUDSPEAKER CABINETS

PROJECT 660



Black RAL 9005 or Grey RAL 7035

ABS loudspeaker

- Bracket included
- 2 way bass reflex
- 6.5" woofer and 1" tweeter
- 100V line transformer(multi Tapp)
- Frequency response @-10dB 70Hz-20kHz
- Dispersion HxV 90°x90°
- High-pass filter recommended 40Hz-24dB/oct
- 4-piece multiple packing
- 40W/80W nominal/maximum power
- Setting 10/20/30/40/8ohm
- Sensitivity 89dB
- Max SPL 108dB

Black RAL 9005 or Grey RAL 7035

ABS loudspeaker

It has the same characteristics as the 640 version, with the following differing features:

- 60W/120W nominal/maximum power
- Setting 15/30/45/60W/8ohm
- Sensitivity 90dB
- Max SPL 111dB



Project 640 WHT
Project 660 WHT

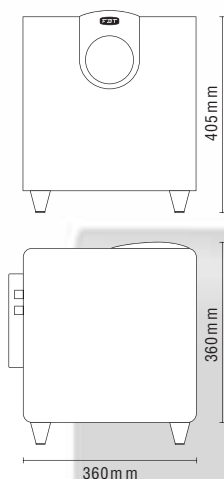


Project 640 BT
Project 660 BT



Wall bracket manufactured from die-cast aluminium with ball/socket multi angle adjustment capability and steel security cable.

	Project 640 BT / WHT	Project 660 BT / WHT
Code	29227 / 32370	29229 / 32371
Configuration	2 way	2 way
Recommended amplifier	80W rms	120W rms
Long term power	40W	60W
Short term power	160W	240W
Line transformer (100V)	10-20-30-40W	15-30-45-60W
Nominal impedance	8ohm	8ohm
Frequency response @-10dB	70Hz-20kHz	70Hz-20kHz
Low frequency woofer	165mm	165mm
Tweeter	25mm	25mm
Sensitivity (@1W,1m)	89dB	90dB
Max. Spl	108dB	111dB
Dispersion	90x90 HxV	90x90 HxV
Recommended hp filter	40Hz-24dB/oct	40Hz-24dB/oct
Input connector	Euroblock	Euroblock
Dimensions (WxHxD)	218x312x219mm	218x312x219mm

**Amplified subwoofer**

- Black or grey colour wooden construction
- 1 way bass reflex
- 180W rms internal amplifier
- 4 ohm nominal impedance
- Frequency response @-10dB 28Hz-180Hz
- Sensitivity 90dB
- Max SPL 112dB
- Dispersion HxV omnidirectional
- RCA input and output connector
- Crossover frequency and volume control



	Project Sub 1180A
Code	29351
Configuration	1 way
Internal amplifier	180W rms
Frequency response @-10dB	28Hz-180kHz
Low frequency woofer	250mm
Sensitivity (@1W,1m)	90dB
Max. Spl	112dB
Dispersion	omnidirectional
Input connector	2 x RCA
Power consumption	200Va
Dimensions (WxHxD)	360x450x360mm

STUDIO.PRO 9

STUDIO.PRO 9 T

STUDIO.PRO 9 A

LOUDSPEAKER CABINETS

Loudspeaker cabinets

- Extremely light and sturdy enclosure made of gas injection moulded polypropylene, black (STUDIO.PRO 9B) or RAL 7035 grey colour (STUDIO.PRO 9W), stand adapter, 2 M6 anchoring points
- 2-way bass-reflex system with 130mm woofer and 25mm high frequency tweeter
- Power 120 Watt
- Frequency response 80Hz-20 kHz
- Sensitivity 95.5dB 1W/1m Maximum SPL 116.5dB
- Dispersion (HxV) 90°x60°
- SUB-D input connectors

Speaker cabinets

Same characteristics as the STUDIO.PRO 9B/W models except for the following:

- Power 80W
- 70-100V 4-position line transformers: 5W/20W/45W/80W
- Sensitivity 95.5dB 1W/1m Maximum SPL 114.5dB

Loudspeaker cabinet

Same characteristics as the STUDIO.PRO 9B/W models except for the following:

- 80W RMS internal amplifiers for the woofer and 20W RMS for the driver
- ADAP® (Advanced Dynamic Active Protection) designed to limit amplifier saturation and ensure complete reliability of the system even in extreme conditions; 24dB/oct active filters
- Frequency response 70Hz-20 kHz
- Sensitivity 95dB 1W/1m
- Maximum SPL 115dB
- Control panel with Ground Lift, Combo XLR/JACK inputs, XLR male output, limiter, volume control



SJ 9 B/W

Adjustable wall support



Model	Code	Colour
SJ 9 B	19706	black
SJ 9 W	19705	RAL 7035 grey

SJ 9 UB/UW

Wall mounting brackets



Model	Code	Colour
SJ 9 UB	19708	black
SJ 9 UW	19707	RAL 7035 grey

ST 20 B

Adjustable floor stand



Code 19710
Adjustable metal floor stand, with safety locking device, max weigh 55 kg

	STUDIO.PRO 9 B/W	STUDIO.PRO 9 BT/WT	STUDIO.PRO 9 BA
Code	19678 / 19677	19680 / 19679	19681
Colour	black - RAL 7035 grey	black - RAL 7035 grey	black
Configuration	2 way	2 way	2 way
Recommended amplifier	120W rms	80W rms	-
Internal amplifier	-	-	80W + 20W
Long term power (AES)	60W	-	-
Short term power (IEC 268-5)	240W	-	-
Nominal impedance	8ohm	-	-
Line transformer	-	70V-100V	-
Frequency response (@-6dB)	80Hz - 20kHz	80Hz - 20kHz	70Hz - 20kHz
Low frequency woofer	1x200 ø 38 mm coil	1x200 ø 38 mm coil	1x200 ø 38 mm coil
High frequency woofer	1xTweeter+horn ø 20 mm coil	1xTweeter+horn ø 20 mm coil	1xTweeter+horn ø 20 mm coil
Sensitivity 1W/1m	95,5dB	95,5dB	95dB
Max. SPL 1m	116,5dB	114,5dB	115dB
Dispersion	90°x60° HxV	90°x60° HxV	90°x60° HxV
Crossover frequency	3,5 kHz	3,5 kHz	2,5 kHz
Recommended hp filter	60Hz 24dB oct	60Hz 24dB oct	-
Input connectors	spring terminals	spring terminals	Combo XLR-M/JACK
Weight	4,8 kg	4,8 kg	5,4 Kg
Dimensions (WxHxD)	255x415x245mm	255x415x245mm	255x415x245mm

Loudspeaker cabinet

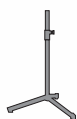
- Extremely light and sturdy enclosure made of gas injection moulded polypropylene, black colour, integral handle
- Stand adapter, 2 M6 anchoring points

- 2-way bass-reflex system with 320mm woofer and 25mm high frequency tweeter
- Built-in class G amplifiers 150W RMS for the woofer and 50W RMS for the high frequency unit; ADAP (Advance Dynamic Active

- Protection) designed to limit amplifier saturation and ensure complete reliability of the system even in extreme conditions (STUDIO.PRO 14BA)
- 24dB/oct active filters (STUDIO.PRO 14BA)
- Power 250 Watt
- Impedance 8 Ohm
- Frequency response 60Hz-20 kHz
- Sensitivity 98dB 1W/1m
- Maximum SPL 122/125dB (STUDIO.PRO 14B) 121dB (STUDIO.PRO 14BA)
- Dispersion (HxV) 90°x60°
- 2 speakon input connectors
- Control panel with Ground Lift switch, Combo XLR/JACK inputs, XLR male output, limiter, volume control (STUDIO.PRO 14BA)

**SJ 14 UB** Wall mounting brackets

Model	Code	Colour
SJ 14 UB	19709	black

ST 30 B Adjustable floor stand

Code 18239
Adjustable, aluminium floor stand, with safety locking device

ST 40 B Adjustable floor stand

Code 18240
Adjustable, metal floor stand, with safety locking device

	STUDIO.PRO 14B	STUDIO.PRO 14BA
Code	19682	19683
Configuration	2 way	2 way
Recommended amplifier	250W rms	-
Internal amplifier	-	150W+50W rms
Long term power (AES)	125W	-
Short term power (IEC 268-5)	500W	-
Nominal impedance	8ohm	-
Frequency response (@-6dB)	60Hz - 20kHz	60Hz - 20kHz
Low frequency woofer	1x320 ø 51 mm coil	1x320 ø 51 mm coil
High frequency woofer	1x25.4+horn ø 25.4 mm coil	1x25.4+horn ø 25.4 mm coil
Sensitivity 1W/1m	98dB	98dB
Maximum SPL 1m	122/125dB	121dB
Dispersion	90°x60° HxV	90°x60° HxV
Crossover frequency	2,5 kHz	2 kHz
Recommended hp filter	40Hz 24dB oct	40Hz 24dB oct
Input connectors	2xspeakon	Combo XLR/JACK
Weight	13,5 kg	16 kg
Dimensions (WxHxD)	410x663x387mm	410x663x387mm

ARCHON 108

PERMANENT INSTALLATION LOUDSPEAKER

ARCHON 106

- 2-way, passive sound reinforcement systems
- 12mm (0.47") baltic birch plywood cabinets
- Custom designed LF woofers, made in Italy
- Custom designed HF dome tweeter, Made in Italy
- Crossover networks equipped with 4 x Euroblock speaker terminals; factory preset for optimal line transformer installation
- Multiple M5 threaded rigging points
- Acoustically transparent steel grille and antidust protection cloth
- New FBT rotatable logo badge following vertical or horizontal installation
- Optional mounting hardware
- Optional line transformer (100W for Archon 108 and 106, 50W for Archon 105)

- Passive Sound Reinforcement 350W / 8 ohm - 121dB SPL
- 1 x 8" (1.5") custom made LF woofer with rubber surround
- 1 x 1.5" HF high-end dome tweeter
- 8 x M5 threaded rigging points
- 2-way, passive sound reinforcement systems
- 12mm (0.47") baltic birch plywood cabinets
- Custom designed LF woofers, made in Italy
- Custom designed HF dome tweeter, Made in Italy

- Crossover networks equipped with 4 x Euroblock speaker terminals; factory preset for optimal line transformer installation
- Multiple M5 threaded rigging points
- Acoustically transparent steel grille and antidust protection cloth
- New FBT rotatable logo badge following vertical or horizontal installation
- Optional mounting hardware
- Optional line transformer 100W

- Passive Sound Reinforcement 300W / 8 ohm - 119dB SPL
- 1 x 6.5" (1.5") custom made LF woofer with rubber surround
- 1 x 1" HF dome tweeter
- 6 x M5 threaded rigging points



AC-W 568



Code 36987
Directional wall metal bracket black for Archon 106

AC-W 568W



Code 37330
Directional wall metal bracket white for Archon 106

	ARCHON 108	ARCHON 106
Code	36252	36251
Configuration	2 way	2 way
Recommended amplifier	350 W rms	300 W rms
System Long term power	175 W	150 W
System Short term power IEC 268-5	700 W	600 W
Transformer	100 / 100 V/W optional	100 / 100 V/W optional
Nominal impedance	8 Ohm	8 Ohm
Frequency response	55Hz - 22KHz @ -6dB	60Hz - 22KHz @ -6dB
Low frequency woofer	8 - 1.5 coil	6.5 - 1.5 coil
AES power	150 W	120 W
High frequency driver	1.5 - 1.5 coil dome	1 - 1 coil dome
AES power	35 W	20 W
Sensitivity (@1W/1m)	92.5 dB	91 dB
Maximum SPL cont/peak (Bi-Amp)	118 / 121 dB	116 / 119 dB
Dispersion HXV	90°	100°
Crossover frequency	2 kHz	2.5 kHz
Recommended HP filter	40hz - 24dboct	45hz - 24dboct
Input connectors	4 x Euroblock 0-8-100V (low-high)	300x440x300 mm
Net dimensions (WxHxD)	248x411x248mm	7,5/16,5 kg/lb
Net weight	6,5/14,3 kg/lb	18/39,6 kg/lb
Transport dimensions(WxHxD)	330x491x330mm	690x370x625mm
Transport weight	8,5/18,7 kg/lb	20/44 kg/lb

ARCHON 105

ARCHON 208S

PERMANENT INSTALLATION LOUDSPEAKER

- Passive Sound Reinforcement 200W / 8 ohm - 115dB SPL
- 1 x 5" (1.25" VC) custom made LF woofer with rubber surround
- 1 x 1" HF dome tweeter
- 4 x M5 threaded rigging points
- Passive Sound Reinforcement Subwoofer 600W / 8ohm 132dB SPL
- 2 x 8" (2" VC) custom made high excursion woofer with bass-reflex enclosure
- 15mm (5/8) birch plywood enclosure
- Two pocket handles
- 2 x Speakon NL-4 connectors



AC-W 568



Code 36987
Directional wall metal bracket black for Archon 105

AC-W 568W



Code 37330
Directional wall metal bracket white for Archon 105

	ARCHON 105	ARCHON 208S
Code	36250	36256
Configuration	2 way	1 way
Recommended amplifier	200 W rms	600 W rms
System Long term power	100 W	300 W
System Short term power IEC 268-5	400 W	1200 W
Transformer	100 / 50 V/W optional	-
Nominal impedance	8 Ohm	8 Ohm
Frequency response	70Hz - 22KHz @ -6dB	50Hz - 500Hz @ -6dB
Low frequency woofer	5 - 1.25 coil	2 x 8 - 2 coil
AES power	70 W	150 W
High frequency driver	1 - 1 coil dome	-
AES power	20 W	-
Sensitivity (@1W/1m)	89 dB	95 dB
Maximum SPL cont/peak (Bi-Amp)	112 / 115 dB	129/132 dB half space
Dispersion HXV	110°	omni
Crossover frequency	3 kHz	external active
Recommended HP filter	60hz - 24dboct	40hz - 24dboct
Recommended external filter	-	Digital management with presets
Input connectors	4 x Euroblock 0-8-100V (low-high)	2 x Speakon NL4 in & thru
Net dimensions (WxHxD)	180x300x180 mm	550x285x480mm
Net weight	4/8,8 kg/lb	18/39,6 kg/lb
Transport dimensions(WxHxD)	260x380x260 mm	690x370x625mm
Transport weight	6/13.2 kg/lb	20/44 kg/lb

CS3130/TW**CS3150/TW****CS3180/TW**

COLUMN SPEAKERS

Column speaker with aluminium body

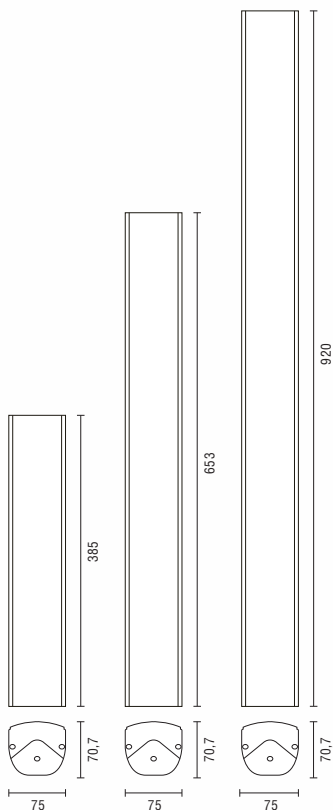
- Power 30 Watt RMS with 70-100V transformer and 7.5/15/30W power selection
- Frequency response 200Hz-16kHz
- Sensitivity 91dB
- Maximum SPL 106dB
- five 2" loudspeakers
- Horizontal dispersion (-6dB) 1kHz/4kHz 180°/120°

Column speaker with aluminium body

- Power 50 Watt RMS with 70-100V transformer and 10/20/40W power selection
- Frequency response 200Hz-16kHz
- Sensitivity 94dB
- Maximum SPL 110dB
- ten 2" loudspeakers
- Horizontal dispersion (-6dB) 1kHz/4kHz 180°/120°

Column speaker with aluminium body

- Power 80 Watt RMS with 70-100V transformer and 15/30/60W power selection
- Frequency response 200Hz-15kHz
- Sensitivity 96dB
- Maximum SPL 114dB
- fifteen 2" loudspeakers
- Horizontal dispersion (-6dB) 1kHz/4kHz 180°/120°



CS3130/TW



CS3150/TW



CS3180/TW

SC A2**Wall fastening bracket**

Code 20130

	CS3130/TW	CS3150/TW	CS3180/TW
Code	37922	37923	37924
Power (R.M.S.)	7,5-15-30W - 100V	10-25-50W - 100V	20-40-80W - 100V
Sensitivity 1W/1m	91dB	94dB	96dB
Frequency response (± 6dB)	200÷16.000Hz	200 ÷ 16.000Hz	200 ÷ 15.000Hz
Loudspeakers	N° 5 x 2"	N° 10 x 2"	N° 15 x 2"
Cabinet	Aluminium	Aluminium	Aluminium
Weight	1,94 Kg	3,4 Kg	4,63 Kg
Dimensions (WxHxD)	65x385x74,3mm	65x653x74,3mm	65x920x74,3mm



WEATHER PROOF SPEAKERS

SHADOW 112CT**SHADOW 108CT**

ALL WEATHER LOUDSPEAKERS

SHADOW 105T

4 wires cable to select the desired power tapping
Water-stop grill with 3 layers of protection
IP55 weather resistant
Standard grey finish RAL 7011

- Multipurpose High Performance 12" Coax 600W/8ohm - 128dB SPL
- 12" coaxial woofer with 2.5" coil and 1" HF driver with 1.7" coil on conical 90° horn
- 100V line transformer with selectable 200W/100W power tapping
- Sturdy molded polyethylene curved enclosure

- Multipurpose 8" Coax 450W/8ohm - 124dB SPL
- 8" coaxial woofer with 2" coil and 1" HF driver with 1.4" coil on conical 90° horn
- 100V line transformer with selectable 100W/50W power tapping
- Sturdy molded polyethylene curved enclosure
- Steel U bracket and other included hardware accessories

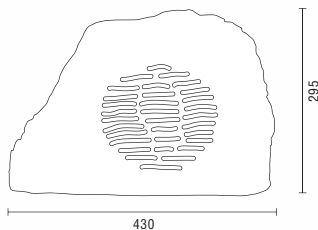
- Multipurpose 5" Full Range 120W/8ohm - 112dB SPL
- 2 way configuration with an high power 5" cone and 1" dome for high frequencies
- 100V line transformer with selectable 50W/25W power tapping
- Die-cast aluminum wall bracket with ball/socket for multi angle adjustment capability, with a security cable



	SHADOW 112CT	SHADOW 108CT	SHADOW 105T
Code	36194	36193	36192
Configuration	2 way	2 way	2 way
Recommended amplifier (Biamp LF/HF)	600 W rms	450 W rms	120 W rms
System Long term power (Biamp LF/HF)	300 W	225 W	60 W
System Short term power IEC 268-5 (Biamp LF/HF)	1200 W	900 W	240 W
Transformer	100 / 200 V/W	100 / 100 V/W	100 / 50 V/W
Nominal impedance (Biamp LF / HF)	8 Ohm	8 Ohm	8 Ohm
Frequency response	70Hz - 20KHz @-6dB	80Hz - 20KHz @-6dB	90Hz - 20KHz @-6dB
Low frequency woofer	12 - 2.5 coil	8 - 2 coil	5 - 1 coil
AES power	250 W	200 W	50 W
High frequency driver	1 - 1.7 coil	1 - 1.4 coil	1 - dome
AES power	50 W	25 W	10 W
Sensitivity (@1W/1m) (Biamp LF/HF)	98 dB	95 dB	89 dB
Maximum SPL cont/peak	124 / 128 dB	120 / 124 dB	109 / 112 dB
Dispersion HxV	90° conical	90° conical	100°
Crossover frequency	1.6 kHz	1.8 kHz	3 kHz
Recommended HP filter	50hz - 24dboct	60hz - 24dboct	70hz - 24dboct
Input connectors	4 wire cable	4 wire cable	7 wire cable
Net dimensions (WxHxD)	430x430x400mm	285x285x250mm	168x222x200mm
Net weight	15 / 33 kg/lb	7 / 15,4 kg/lb	3,5 / 7,7 kg/lb
Transport dimensions(WxHxD)	530x530x500mm	365x365x330mm	250x300x280mm
Transport weight	17/37 kg/lb	9/19,8 kg/lb	4,5/9,9 kg/lb

GDS 200T/DT

EXTERNAL SOUND SPEAKERS



IP55 external sound speaker

- Dual cone two way loudspeaker
- Polyurethane framework
- 8" diameter
- Stainless steel basket
- Polypropylene diaphragm
- Rubber suspension
- ø 25,5mm coil
- ø 100mm coil ferrite magnet
- 8 ohm impedance
- 150W maximum peak power
- 75W Rms active power
- 40 Hz - 18.000 Hz passband
- 90dB +/- 2dB sensitivity (1W/1m)
- Size 430x295x300mm
- Weight 3.6 kg



	GDS 200T/DT
Code	20010
System	2 way dual cone
IP-rating	55
Maximum power	150W
Active power	75W rms
Constant voltage	100 V
Banda passante	40-18.000Hz
SPL Sensitivity	90 +/- 2dB (1W/1m)
Dimensions (WxHxD)	430x295x300mm
Weight	3,6 kg

GS 20/T

EXTERNAL SOUND SPEAKERS

IP66 external sound speaker

- Guaranteed to resist to difficult weather conditions
- It can be placed near pools, on terraces or in gardens
- This versatile speaker can be mounted on the surface or underground
- Speaker's base has been designed to guarantee a firm and safe positioning
- Offers extraordinary coverage thanks to its design, enabling a 360° sound dispersion
- 80Hz-15,000Hz frequency response
- 95dB+/-3dB sensitivity
- 100V Transformer
- 4" Woofer
- ABS, green coloured
- Diameter 215x245mm
- Net weight 2.04Kg



	GS 20/T
Code	29432
System	2 way dual cone
IP-rating	66
Maximum power	150W
Active power	20W
Sensitivity	95dB+/-3dB
Transformer	100V
Woofer	4"
Colour	Green in ABS
Dimensions	ø 215x245mm
Weight	2,04 kg

FBT: EXCELLENCE WITH A VAST SELECTION

FBT offers a vast and comprehensive range of speakers to meet all sound requirements and applications. Specifically designed to enable simple and safe installation, with a modern and eye-catching design, these products are the ideal choice to solve all ambient sound distribution requirements.

All product lines, from recessed ceiling loudspeakers in paint-finished metal or in plastic with dual cone or coaxial loudspeakers, speakers constructed using fire-resistant materials, IP 55-56-68 weatherproof elements, speakers designed for clean rooms or special production departments, to the industrial or entertainment sound models, have been designed according to the latest electro-acoustical parameters.

The result is absolute excellence; perfect music reproduction and optimal voice clarity and speech fidelity. Special attention has been paid to the simplification and reduction in time required for installation and network connections of the power cables, thanks to a special accessory kit supplied as standard.

The basic principles of effective surface mount ceiling loudspeaker installation

The first priority of a high quality sound reproduction system is that of providing listeners with sound information at an acoustic level that is higher than any possible background noise. The system must simultaneously assure a very wide frequency band and the maximum intelligibility. It should also

guarantee a flat frequency response and uniform sound pressure to give optimum listening pleasure and clarity. To meet these requirements, the hypothetical ideal solution would be to place each sound source at an equal distance from all possible listening points.

CEILING APPLICATION

In environments offering suitable height, this ideal reference standard can be approximated by using loudspeakers with very wide response and dispersion angles that remain unchanged at different frequencies, arranged in a ceiling or shower type configuration. This gives the following benefits:

- 1- Maximum sound distribution uniformity
- 2- Maximum speech intelligibility
- 3- Constant quality of music reproduction
- 4- Reduced presence of reverberation and stationary waves in the environment
- 5- Sound source remains at a constant distance from the listening position
- 6- Ample sound energy also at the lowest level

Once the required type of loudspeaker has been chosen, and the characteristic parameters considered (particularly the relationship between the dispersion angle and the room surface area), the number of units needed to obtain constant and uniform sound diffusion can be easily calculated. The number of loudspeakers is calculated by dividing the floor area in square metres by the area of coverage of each loudspeaker on the listening plane. Figure 1 clearly illustrates the above concept.

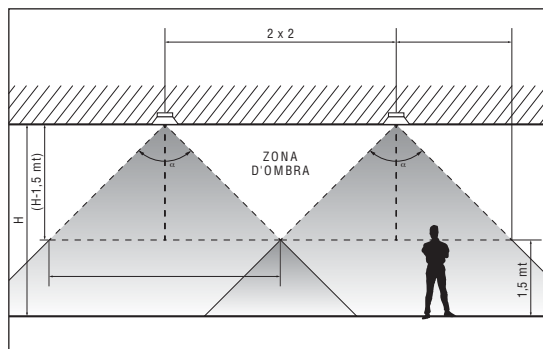


figure 1

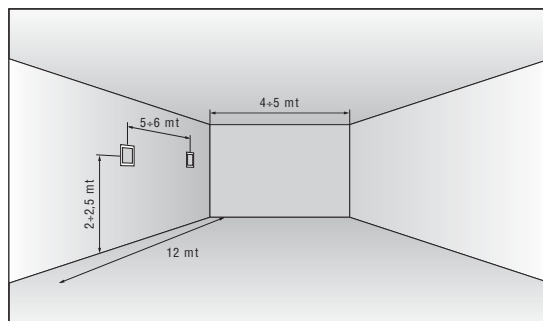


figure 2

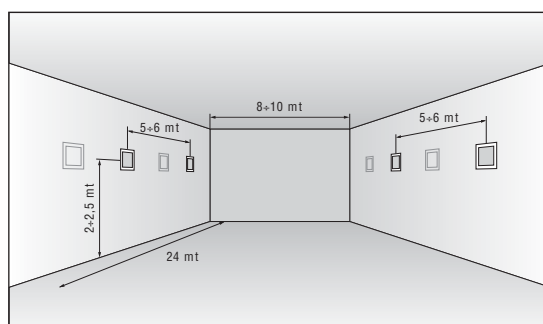


figure 3

WALL APPLICATIONS

If the architectural features of the room are not compatible with a ceiling configuration or if a "wall" application is preferred, it is essential to observe a few basic rules to obtain the best possible sound distribution. In order to maintain the listening point inside the direct signal area, both surface mounted and external loudspeakers, with power from 6 to 20 Watt, should be installed at a height of between 2 and 2.5 m. The maximum

distance between adjacent loudspeakers must be no more than 5/6 metres along the length of the room, which should be no wider than 4/5 metres. For wider rooms, e.g. about 8-10 metres, it is recommended to install loudspeakers in an alternated pattern along both the opposing walls in such a way as to provide adequate coverage and maintain sound pressure at the most constant possible level in the area in question (see figures 2 and 3).

A quick and approximate calculation can be made of distance d , which separates the centres of two loudspeakers, when the angle of emission A and height of the ceiling H is known: $d=2*(H-1)*B$ where H is the height of the ceiling expressed in metres, constant 1 is the height of the listening surface of a seated person and B is the tangent of $A/2$. From the above data, it is evident that for the same ceiling height H , loudspeakers with wider dispersion angles offer a larger sound diffusion area and therefore a smaller number of speakers are effectively needed.

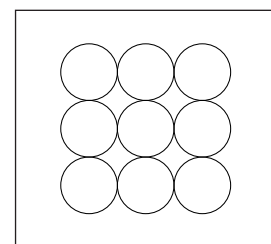


figure 4

Layout of loudspeakers for 80% coverage

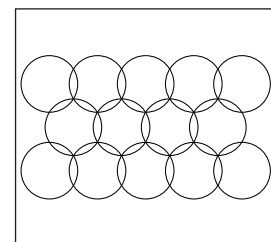


figure 5

Layout of loudspeakers for 100% coverage

Figure 4 shows the surface area covered by the sound signal with relative dark zones, and figure 5 with a different grid and greater number of loudspeakers (50%) guarantees maximum uniformity.

Angle of loudspeaker emission	Coefficient B	d with H=3m	d with H=3.5m	d with H=4m	d with H=4.5m
80	0,84	3,36	4,2	5,04	5,88
90	1,00	4	5	6	7
100	1,19	4,76	5,95	7,14	8,33
110	1,43	5,72	7,15	8,58	10,01
120	1,73	6,92	8,65	10,38	12,11
130	2,14	8,56	10,7	12,84	14,98

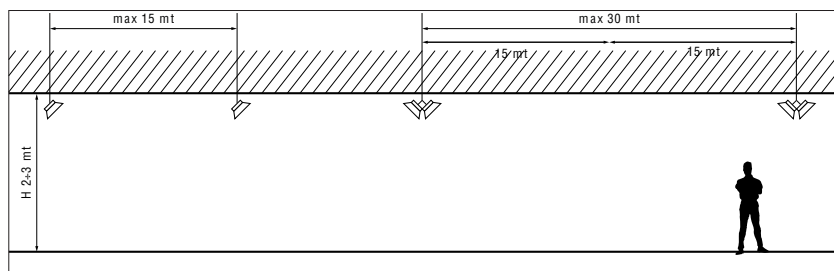


figure 6

For sound distribution in corridors, tunnels, passenger platforms in railway or underground railway stations, horn loudspeakers are used, suited for vocal reproduction, and higher quality loudspeakers called "sound projectors". In all cases these loudspeakers must be installed at a maximum distance of 15 metres from one another, mounted all in the same direction and in observance of the phase of each loudspeaker. Alternatively bi-directional versions of these loudspeakers can be considered, positioned at max. 30 metres from one another and again in observance of the connection phase. (see figure 6)

DEGREES OF PROTECTION

The characteristics of a product in terms of its resistance to the penetration of solid objects and liquids is indicated by the letters IP (International Protection) followed by two numbers. The first number identifies the protection against the ingress of solid objects, while the second indicates liquid penetration resistance, in accordance with EN standards 60529-CEI 70-1.

IP degree of protection

- The first number identifies the level of protection against the ingress of solid objects. Number from 0 to 6.
- The second number identifies the level of

protection against penetration of liquids. Number from 0 to 8.

First IP number:

- 0 Not protected
- 1 Protected against the ingress of solid objects larger than 50 mm
- 2 Protected against the ingress of solid objects larger than 12 mm
- 3 Protected against the ingress of solid objects larger than 2.5 mm
- 4 Protected against the ingress of solid objects larger than 1 mm
- 5 Protected against dust penetration
- 6 Totally dust-proof

Second IP number:

- 0 Not protected
- 1 Protected against vertically dripping water
- 2 Protected against water dripping at an angle (up to 15° from the vertical)
- 3 Protected against rain
- 4 Protected against water spray
- 5 Protected against water jets
- 6 Protected against waves
- 7 Protected against the effects of temporary immersion
- 8 Protected against the effects of permanent immersion

Constant impedance lines are used above all in the case of a low number of loudspeakers, placed at a minimum distance from the amplifier (<20m).

The constant voltage connection system offers a host of advantages making it ideal for sound systems of all sizes, above all in the

case of long distances. This connection system requires each loudspeaker to be equipped with its own line transformer, which adapts the impedance of the loudspeaker (usually very low) to the much higher level of the line itself. In proportion to power transmitted, the current circulating on a line at 100V is considerably lower than that circulating on wires of a constant impedance system, and consequently drops along the line are less frequent; therefore the cable section can be smaller.

The function of the device named "AMPLIFIER" is to raise the signal of a sound source, such as a microphone, CD player, cassette recorder or an AM/FM tuner to a sufficient level to pilot the transducer "LOUDSPEAKER".

The amplifier has several inputs, to which the various sound sources are connected.

The sound sources have to be mixed (mixer) and acoustically modified with tone control and equalisers to optimise listening in relation to the environment's characteristics. A terminal board is also fitted on output indicating impedance and voltage to which the loudspeaker line is connected.

A few basic rules must always be observed:

1. When the load is on "constant impedance", this must be connected

to the relative socket.

For example a load of 4 ohm must be connected to socket marked 4 ohm, and so on. The power that the load can withstand must always be greater than the amplifier's rated power.

For example in the case of a load of 100 Watt, the amplifier must have a power equal to or less than 100 Watt.

2. When the load is at "constant voltage", this must be connected to the sockets indicating output at constant voltage -50-70 or 100 Volt; the power that the load can withstand must always be less than or equal to the amplifier rated power. For example a load of 100 Watt, the amplifier must have a power equal to or greater than 100 Watt.

To calculate the value of the amplifier power, simply add together the power of each loudspeaker, in the case of a "constant voltage" system.

However, on a constant impedance system, the load must have an equivalent impedance (series/parallel) equal to or greater than the minimum value indicated on the amplifier output.

The loudspeaker power supply lines, with no connected attenuator, must be with 2 sheathed wires; cables with 3 sheathed wires are required in the case of lines using

attenuators which can be disabled if an emergency is activated. Adequate wire sections are required: 1.5 mm² for lines up to 500 Watt power 2.5 mm² for lines with power over 500Watt. The following general standards must also be observed:

- Never use a single cable (lead) for loudspeaker connections: this would cause disturbance producing a loud "HUM"
- Never use shielded cables for the loudspeaker connections: this would cause serious damage to the power units.

Model	Code	page
AC-W568	37987	78-79
AC-W568W	37330	78-79
AL 8000	17074	31
AM 5030	11583	47
AP 08	12897	43
AP 12	12898	43
AP 18	12667	43
AP 22	12178	43
AP 26	12668	43
AQUA 30	10436	56
ARCHON 105	36250	79
ARCHON 106	36251	78
ARCHON 108	36252	78
ARCHON 208S	36256	79
ASG 230	11864	27
AVL 606	14142	33
BF-T 5043 L	18322	30
BK 560 CRT	09309	56
CAD 20 T	11469	61
CAR 6 FT	11956	60
CESL 10T	29420	62
CESL 10T BIDI	29429	62
CESL 20T	29421	62
CHA 1004	37711	11
CM 08	12682	43
CM 12	12681	43
CM 18	12385	43
CM 22	11827	43
CM 26	12669	43
CM 601	27516	28
CS 3030/T	20128	80
CS 3040/T	20131	80
CS 3060/T	20129	80
CSL 106/T	29427	58
CSL 520 TIC	29416	58
CSL 606 TWP	29429	59
CSL 630 TIC	29417	59
CSL 840 TIC	29418	59
CSP 406 T/EN	37727	69
CSP 412 T/EN	37728	69
CUD4000	34554	19
CUW4000	34555	19
CV 2010	35541	32
D8P-1	37936	36
DG 01	12114	44
DP 10 T	09352	60
DPD 10 T	11818	60
DPU 1125 C	37724	11
DPU 1250 C	37725	11
DPU 1500 C	37726	11
EAC4000	34556	19
FBT AC CS 1CH	27511	22
FBT AC CS 1CU	27510	22
FBT AC CS 1DU	27512	22
FBT AC D7P-10	37648	22
FBT AC D7P-20	37649	22
FBT AC D7PDH-1	37650	22
FBT AC EXM-1	37646	23
FBT AC EXS-1	37647	23
FBT AC MX-8	37645	36
FBTAC CM 501	27497	34
FBTAC CX 504	27498	34
FBTAC GM 5206L	27515	28
FBTAC GM 5212L	27514	28
FBTAC GM 5218L	27513	28
FBTAC Mh 750	27494	34
FBTAC Mh 920	27496	34
FBTAC PT 850B	27495	34
FBTAC ST 5050	27499	29
FBTAC ST 850	27500	29
FBTAC US 8001 D	27493	34

Model	Code	page
FBTAC US 902 D	27492	34
FMD 2001	37485	14
FMD 2012	37486	14
FMG 2000	37488	14
FMH 2000	37487	14
FPS/505T	35302	55
GB 820/T	29430	62
GDS 200T/DT	20010	83
GS 20/T	29432	83
HM-26	13543	33
HS 50T	29422	63
INTERCOM 1300	18083	24
IW-100 T	17859	57
IW-200 TCP	17862	57
LM-10	13544	33
M 12X4	18147	37
MBT 1101	37739	32
MBT 1106	37492	32
MBT 1112	37493	32
MBT 1112E	37494	32
MB-T 6400 S	28840	30
MB-T 8001	19543	31
MB-T 8004	11828	31
MB-T 8008	12122	31
MCA 4030	20236	42
MC-F 5042	10044	26
MCSL 006 TW	29425	58
MCSL 006 TWP	29426	58
MD-F 5044	10045	26
MD-F 5045 S	10046	27
MD-F 5045 SI	15294	27
MDS 1060	37495	50
MD-S 1100	10040	26
MDS 1120	37496	50
MDS 1240	37497	50
MD-S 1300	10042	26
MDS 6120	37643	51
MDS 6240	37644	51
MHO 420 TW/EN	37735	70
MHS 50T	29431	63
MMU4000	34553	18
MMZ 8004 S	19812	38
MPA 5120	37490	46
MPA 5240	37489	11-46
MPA 5480	37491	11-46
MPS1016	04693	44
MPU 2120	31080	40
MPU 4060	31079	40
MPU 4120	31059	41
MPU 4240	31078	41
MRK 12		43
MRK 20	36546	43
MRK 24	35673	43
MRK 30	35839	43
MRK 36		43
MS 30 BK	18245	27
MS02 CD3/DG	27868	45
MS02 CD3/T	27867	45
MSP 420 TW/EN	37734	67
MXA 1060	37638	48
MXA 1120	37639	48
MXA 3120	37640	49
MXA 3240	37641	49
MZU 2008	12944	39
PA-A 01	12905	44
PC 01	12117	44
PC 02	12116	44
PC 03	12912	44
PH 10 T	11474	64
PH 20 T	11475	64
PH 30 T	10446	64

Artwork Studio Conti
Photos F:16 studio
Printers Tecnostampa

FBT Elettronica S.p.a.
has the right to amend products and specifications
without notice.

FBT Elettronica SpA
62019 Recanati (MC) - Italy
Tel: +39 071 750591
Fax: +39 071 7505920
info@fbt.it - www.fbt.it
(International Headquarter - Factory)

FBT Audio (UK) Ltd
South Croydon, Surrey, UK
Tel: 0844 310 4592
Fax: 0844 310 4594
info@fbtaudio.co.uk
www.fbtaudio.co.uk

FBT USA, Inc.
Palm Coast, Florida, US
Tel: 800 333 9383
fbtusa@sbcglobal.net

Distributed by

English